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ABSTRACT

Research conducted as to the feasibility of establishing Alternate Cooperative Education in 11- or 12-week, quarter-system, 2-year colleges, as well as to provide a replicable model for conducting research as to implementing an ACE program, is described. Cooperative education is defined as an academic program that provides learning for students through real-life experiences with businesses, agencies, and companies in the community. In Part 1 of the report--ACE Findings: Faculty, Employers, Students, Articulation--information about faculty, employers, students, and colleagues at senior institutions is discussed. The findings suggest that support existed for full-time, short-term paid and creditable field learning experiences among all the groups. In Part 2, ACE Recommendations, recommendations of the ACE Task Force and recommendations, based on research findings, for ACE implementation and long-range program development are provided. Part 3, Background Information and Appendixes, contains information related to cooperative education in California community colleges, Foothill Community College District, ACE research strategy and activities, a survey of 2-year alternate cooperative education programs, and a survey of exemplary Ohio and Washington cooperative education programs, and provides program information and sample forms. (DB)

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ALTERNATE COOPERATIVE EDUCATION
for
TWO-YEAR QUARTER SYSTEM COLLEGES

Feasibility Research and Program Design

Foothill Community College District
Los Altos Hills, California

John W. Dunn - Chancellor
Nathan H. Boortz - Director, Technical Education

August 15, 1974

S. H. Davidson - Margaret T. Shoenhair
Project Researchers

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PREFACE

This report is a summary of nearly a year of research activity conducted by a Research Team in the Foothill Community College District in Northern California.

In the study Dr. Davidson and Mrs. Shoenhair present the chronology of a research process designed to explore the feasibility of establishing Alternate Cooperative Education in 11 or 12 week quarter-system two-year colleges and to provide a replicable model for conducting the kinds of research activities essential for making a rational decision on whether to inaugurate an ACE program in another setting.

Using as a focus the De Anza and Foothill Community Colleges in Santa Clara County, California, the writers have concentrated on the character of these institutions as revealed by their organizations, the personalities involved and the community within which they are valued educational and social resources.

Avoiding merely a dreary compilation of facts, figures and data, the writing team concentrated instead on the interpretation of the processes and activities of establishing a research model, of involving campus decision-makers and information providers, of seeking out community leaders who will become the educational participants with the colleges, and of accommodating the needs and interests of the students who stand to be the ultimate beneficiaries of any such program. Readers will note a casual, informative and flowing narrative punctuated occasionally by appropriate subjective observations and evaluations by the Research Team. The authors' purpose was to open up a series of areas of concern and consideration so as to expose all segments of the campuses and the surrounding community which would eventually come into play in the formal establishment of an ACE program.

Dr. Davidson and Mrs. Shoenhair have long been seriously interested in the possible expansion of field experience options in our area. Their thorough and professional study will be of great value to our two colleges and to other colleges and districts throughout the nation.

Nathan H. Boortz, Director
Technical Education

INTRODUCTION

The Foothill Community College District in Santa Clara County, California, responding to students' interests and needs for field experience opportunities not currently available through the existing work experience, clinical or internship programs of the district, began an alternate cooperative education investigation project through the Office of Technical Education in the Spring of 1973. The project director engaged in several months of study, discussions and visits in California and in other states. Funds awarded to the District in October, 1973, supported the establishment of a full research project to design a model cooperative education program for any 12-week, quarter-system two-year college, and to describe the processes by which the district and its faculty, the community and its employers and the colleges and their students are accommodated in the design.

With the appointment of a research associate, a community college social science instructor with previous experience in institutional research and in the design of cooperative education programs, and with the organization of an Advisory Task Force on Alternate Cooperative Education (ACE) in November, 1973, the ACE Research Project was actively established. Since that time the Research Team Project Director and Research Associate have simultaneously pursued the overall tasks of (1) assessing and encouraging support for ACE among the faculty, staff and students of the District and (2) exploring and developing employers' willingness to create ACE internship learning stations. This report is a summary of the first year of those activities.

From the first the Team was aware of dual responsibilities -- to the U.S. Office of Education to produce a model project which any two-year, quarter-calendar college could adapt to fit its students, faculty, institutional needs, and economy; and to the Foothill District to learn whether extensive, systematic research would substantiate the need for ACE and simultaneously lay foundations for future implementation.

The researchers defined themselves as district staff conducting applied research. Outsiders might have been more objective, but the Team believes its previous years of involvement and experience in this district have been assets far more significant than the limitations that the staff positions have entailed.

The essential dilemma of applied, developmental research is that data-gathering may appear to conflict with program establishment and implementation. Members of the advisory Task Force and others at times had contradictory views about how much energy and attention should be given to research and how much to pilot implementation of the alternate concept. The researchers perceived internship development, employer relations and student contacts as research activities and, at the same time, as possible model procedures for a fully-operational ACE program.

Cooperative education, as the term is used here, is an academic program providing learning for students through real-life experiences with businesses, agencies and companies in the community. College faculty coordinate students' activities, helping to identify measurable learning objectives, consulting with students, visiting off-campus learning stations, and evaluating, with the assistance of the field supervisor, the accomplishment of each student's specified goals. Academic credit which applies toward degrees or certificates is awarded for documented learning through the field experience. Cooperative placements are closely related to students' educational and career aspirations; the interaction of classroom theory and practical application allows students to participate in an educational process which is uniquely relevant to their own abilities, interests and desires. Organizations which provide cooperative learning stations create responsible, well-trained workers, observe potential permanent employees, and benefit from the productivity of enthusiastic student-employees.

Alternate co-op interns rotate between quarters of full-time employment and full-time study. ACE means that some students can gain field experience far from home, perhaps in Washington, D.C., or Alaska. It provides the luxury of concentrating on the work assignment when off-campus, and on study during on-campus terms. It involves higher-quality learning stations than those available to part-time student-employees. In short, ACE is an important addition to the range of possible learning patterns available to college students.

Several experiential education options are available in the Foothill College District. The ACE Project Director, who is also the District's Director of Cooperative Education, administers the parallel work experience program. Every quarter about 650 De Anza and Foothill College students who simultaneously work and study enroll in this program which is built around defined-objectives training agreements, faculty coordination, and mandatory related instruction. Part- and full-time employees pursue certificates and degrees in over 70 vocational programs and more than 50 transfer programs. Other students receive practical field experience through allied health clinical placements, real estate and management internships, and special apprenticeships and work-engagement positions, all supervised by the Director of Cooperative Education. In well-established programs with strong classroom components, such as allied health clinicals and preceptorships, his responsibility is to monitor and coordinate the supervision and finances of faculty program directors and contracts for placement.

Since the inception of organized field experience programs in the District in 1970, the numbers of students involved, numbers of employers participating, range of possible curricular areas and institutional support have all expanded rapidly. Both the 1972 and 1973 District Plans for Technical Education [which by state mandate detail both immediate and long-range planning for vocational programs] stress the need for continuing and expanding high-quality cooperative education and propose that Alternate Cooperative Education be implemented if the feasibility of such an instructional program could be established.

Recognizing and believing in the value of alternate co-op, the District's Director of Technical and Vocational Education has wholeheartedly encouraged the research project, allowing the researchers complete autonomy yet providing extremely helpful advice and guidance when requested to do so. His confidence, and the patient manuscript preparation by Florence Sivila under very difficult conditions, have been strongly supportive. The ACE project has benefited immensely from the time, energy, information and advice shared by many other individuals, and we are most appreciative of all the assistance given.

This report has been written primarily for colleagues planning or engaged in feasibility studies, and secondarily for established cooperative educators or Foothill District personnel. For this reason the research findings on faculty, employers, students and articulation are presented first, followed by detailed recommendations for program implementation. Part 3 includes extensive background information and appendices which should help readers understand the environment and manner in which the Research Team worked. We hope that others conducting similar applied research may find sufficient information and direction in this discussion to learn from our experiences, profit from our mistakes, and be encouraged by our optimism that college personnel, students and employers will enthusiastically support a well-planned alternate program.

S. H. Davidson
Margaret T. Shoenhair
August 15, 1974

PART 1

ACE FINDINGS: FACULTY, EMPLOYERS, STUDENTS, ARTICULATION

All ACE research was intended to gather evidence of people's attitudes and expectations as they responded to the concept of alternate cooperative education. In this chapter information about faculty, employers, students and colleagues at senior institutions is presented and discussed. Sample instruments and raw data are displayed in appendices for readers interested in our methodology. Overall, the findings suggest that support for full-time, short-term paid and creditable field learning experiences is widespread among all the groups we studied.

Faculty

Reports from colleges and universities around the country indicate that successful cooperative education programs depend on faculty support and involvement. If they believe in co-op as a valuable educational program, faculty members not only coordinate students and refer students to the program, they integrate co-op patterns into their new and established curricula, they draw upon students' extra-classroom learning and contacts to keep their courses up-to-date, they help develop new learning stations through their colleagues in the community, and they participate in seminars and other related instruction. (See Heermann, esp. Chapter 6)

The existing Foothill District parallel work experience program, clinical programs in medical fields, and internships in real estate and business depend heavily on particular instructors and division chairmen. The Research Team expected the support and understanding of these 30 to 40 faculty members from both campuses. ACE was perceived by the Team as an educational program requiring more extensive faculty involvement than any previous field experience effort and as a vehicle to further establish interest and confidence in experiential learning.

Our initial hypothesis, subsequently confirmed, was that a large majority of instructors would be uninterested in co-op. Many feel they are too busy with heavy teaching loads and other responsibilities. Others resist the role redefinition co-op requires. Teachers who emphasize imparting information in traditional classroom settings may not perceive facilitating student learning through off-campus experiences as their responsibility. Instructors in areas such as physics or mathematics, where theory and content are relatively clearly defined, or fields such as philosophy or history which involve very limited practical opportunities for beginning students, may have great difficulty understanding the potential of co-op for themselves, their students, their colleagues and their colleges.

Many instructors also resist any innovation, particularly if they perceive it originating from a central administrative office, and this tendency is acute in a multi-campus district where the needs and interests of the campuses must be balanced with total district concerns.

Sharing the conviction that the success of ACE depends heavily on faculty and the expectations and awareness of faculty concerns described above, the Research Team consciously tried to keep instructors informed about the project and encourage their participation in project activities.

Selection of faculty representatives for the advisory Task Force was the first activity involving faculty. The Business Division Chairman from De Anza and the Engineering Division Chairman from Foothill, along with a counselor and another instructor from each campus, were appointed to the group. Involving more regular classroom faculty, in addition to division chairmen and others with both administrative and teaching responsibility, might have improved dissemination of information about our activities. Most important, though, an advisory group cannot be depended upon for communication with faculty, no matter what its size or composition; other channels must be utilized as well.

It is important that researchers be visible. The project staff assistant was introduced at a number of faculty and committee meetings. This led naturally to visits to division faculty meetings after we abandoned the ideas of scheduling our own group meetings and trying to arrange a series of small discussion groups. Rearranging the original plan to gather data on internship possibilities before speaking to instructors, appearances were made at regular meetings of nearly all divisions on both campuses. Verbally and through a memo the Research Team asked for suggestions, comments, employer contacts and other ideas. Our availability and interest in phone calls, individual and small group discussions with faculty were emphasized,as were the relatively short time line for study and the opportunity for instructors to have impact on our initial and subsequent activities. By the end of the third month of the project, despite the difficulties of arranging meeting calendars, nearly 400 full-time faculty members on both campuses had personal exposure to the ACE project and had been urged to help the Research Team.

Realizing that some instructors never attend meetings, and that two or three divisions meet rarely, a printed letter was placed in each instructor's box reiterating the information shared personally with division faculty. Perhaps with a small, homogeneous faculty repeated efforts using various communications channels would seem redundant or pretentious, but we wanted to insure every instructor had some exposure to the project.

These contacts led to some discussions with individuals and small groups. Only a few faculty members became substantially involved in project activities; several were highly valuable in developing learning stations, revising curricula incorporating field experience options into proposed programs, and referring student applicants at our request.

The Research Team spoke to both Academic Senates following most of the divisional appearances, again briefly describing the concept and responding to questions. As the elected representatives of the faculties, these groups are traditionally sensitive to funded projects with curricular and staffing implications. Following these discussions neither Academic Senate expressed concern or asked for more information, though Senators were encouraged to consult their constituents and the Senators on the Task Force were requested to keep their colleagues informed.

Seeking quantitative data, we surveyed faculty attitudes at the beginning of Spring Quarter with a one-page questionnaire. The cooperation of division secretaries in distributing and collecting the forms accounts for the district-wide 40% return rate. (For a sample, see Appendix 3.3f)

SUMMARY OF FACULTY SURVEY RESPONSES

1.	My awareness of field experience is	extensive	14%	(n=154)
		moderate	58%	
		minimal/non-existent	28%	
2.	My interest in field experience is	high	62%	(n=152)
		moderate	35%	
		minimal/non-existent	3%	
3.	Students	need field experience	47%	(n=152)
		may need field experience	45%	
		do not need field experience	8%	
4.	Students in my classes	always or frequently	25%	are involved in field experience
		occasionally	42%	
		never	8%	(n=151)
5.		I am already involved	44%	(n=133)
		I would like to be involved	38%	
		I would rather not be involved	18%	

De Anza College returns	36%	(69/194)
Foothill College returns	45%	(85/188)
District response rate	40%	(174/382)

Overall, very substantial interest in,and great awareness of field experience programs are indicated; over 90% of the responding instructors felt their students need or may need field experience. Only 18% of the respondents would rather not be personally involved in cooperative education. Another 50 teachers said they were not presently involved but would like to be. Non-respondents concerned about or hostile to experiential programs could have returned the survey form indicating this posture. As no such responses were received, we assume there are many instructors with no strong feelings for or against co-op; the survey results reflect very positive attitudes toward co-op among the many faculty who did complete the questionnaire.

Engineering/technology faculty at De Anza, with the assistance of the Research Team, created a design/drafting cooperative education program in which ACE internships during the second year may substitute for required classes. The curriculum committee adopted the plan enthusiastically; it should be a model for programs in other divisions. At Foothill College, the curriculum committee adopted variable-unit ACE internships which can accommodate students in every major and career field. These options are presently available to students. [Appendix 3.3i presents these courses]

During the first week of June, before the conclusion of the academic year, a one-page "progress report" was distributed to all faculty and staff on both campuses through their mailboxes. (See Appendix 3.3j) Light-hearted in tone, it detailed specific faculty members' contributions to the project and summarized interim research findings. This further communication with the teaching staff was motivated by the desire to keep instructors informed.

Employers

Foothill District students have access to many exciting employment opportunities, not only in the richly diversified economy of Santa Clara County described in Appendix 3.2, but in San Francisco, the greater Bay Area, and other regions. The California Education Code allows cooperative education students to gain experience in any geographic location.

The range of career programs offered by the District (Appendix 3.2) reflects the wide range of employment in the region. Every career program is guided by an advisory committee composed of practioners in each field; these committees represent a source of advice and support for cooperative education as a part of appropriate career programs, and a direct source of possible learning stations and internships. They also represent strong community interest and involvement in the colleges' activities, support that will be critical to a substantial co-op program. Off-campus instruction, which occurs at 87 different industrial, residential and business sites, leads to much direct contact between instructors and staff and "real-world" people also.

Another very essential source of employer support for ACE is the group of over 300 employers who participate every quarter in the parallel work experience program. These employers agree to on-site visitations; they sign learning agreements specifying measurable learning objectives identified jointly by the job supervisor, instructor-coordinator and student; they evaluate in writing the student-employee's performance.

Some of these employers are interested in creating ACE internships, but their familiarity with parallel WEXED complicates the job development process. A few employers see no reason for co-op when full-time employees can attend evening classes. Employer participation in alternate programs is often tentative at the outset because the concept is simply not familiar to most employers or supervisors in California. One is reminded of the observation by Dean Schneider at the time he initiated the program at Cincinnati:

> Most of these men (employers) showed interest and faith in the scheme as a general proposition; but when it came to adopting it as an actual business policy, some were chary of so radical an innovation. (Barbeau, p. 66)

The arguments of prospective employers about the alternate plan are not dissimilar in California from those given elsewhere. Employers considering a 12-week rotation period, however, express additional concerns; (1) a heavy initial "investment" in training time before the student-employee becomes productive followed by a too-brief performance period until the student returns to campus and a second student begins the cycle; (2) the increased training time involved when a student is advanced to more responsible learning experiences in the second rotation period or fails to return to the employer and a third participant is assigned to a spot; (3) increased payroll and accounting activity caused by 12-week _vs_. 18-week terms. The immediate alternative suggested by most prospective employers is "Let the student work two consecutive terms (24 weeks) and then we will rotate a new student into the system." This, of course, has severe limitations for many students in terms of academic course programming, availability of classes and possible delayed graduation.

In order to acquaint employers with the alternate concept and assess the strength of their concern about some of these issues, 565 employers were surveyed by mail. Accompanied by a cover letter signed by the District Chancellor, a brief conceptual statement and one-page questionnaire was sent to employers who have used the placement services of the colleges, employers listed by local Chambers of Commerce, employers recommended by faculty and employers of parallel work experience students. [An attempt was made to include major employers and a wide variety of corporate/agency organizations.] The survey form was intended to produce general background data on employers, information about student hiring, attitudes toward education and training, and specific positions which could become ACE learning stations.

As responses were received, they were assigned to one of the following six categories.

SUMMARY OF EMPLOYER SURVEY RESPONSES

		Number of responses	Percent of total
1.	High priority/likely ACE	13	15%
2.	ACE possible	16	18%
3.	ACE possible - clerks, techs	12	14%
4.	Part-time students possible	2	2%
5.	ACE possible in the future	8	9%
6.	ACE not possible	37	42%

Assigned to Category 1 were survey forms which met one or more of these criteria: high probability of committing one or more full-time, high-quality learning stations for one year; high probability of same for members of one or more target populations; previous personal or organizational contact with one or both colleges (employers of work experience students, Advisory Committee members, etc.); public service agencies or governmental agencies/organizations. The second category included responses from employers which did not meet the above criteria but which expressed general interest in ACE. The third group mentioned positions for clerks, technicians, assemblers and other low-skill student-employees only. Forty-seven percent of all questionnaires returned were assigned to one of these three categories. In categories 4-6 were responses from 42% of the organizations indicating no ACE possibilities, and 11% involving possible part-time student-employees or future interest in full-time ACE interns.

Neither size of labor force, geographic location nor type of industry or agency is clearly correlated with positive response, though some suggestive patterns emerge from inspection of the survey replies. Electronic firms responded disproportionately to their numbers in the total sample, though they are heavily represented as one of the primary types of local employers. Presumably this is because they are in constant need of both professional and subprofessional technical personnel and are accustomed to hiring community college students and graduates and to upgrading existing employees' skills through community college programs. Small firms of less than 100 employees generally indicate they would have difficulty accommodating alternating students. Larger firms with more varied employment patterns have both more flexibility in creating jobs and more frequent employee turnover. Many of those respondents uninterested in alternate co-op were officers of small, highly-specialized firms or self-employed lawyers, doctors, and other professionals.

In addition to the mail survey, informal meetings and other explorations of employer interest in ACE, concentrated effort went into selected areas of potential employment. Multiple discussions were held with educators about opportunities for paraprofessionals in classrooms, libraries, career centers, and administrative centers in elementary and secondary schools. Local public schools are eager to create learning stations for student-volunteers; paying interns even a modest stipend is most difficult in an area where student population is falling and teachers are being released. A meeting with representatives from a high school district, two elementary districts and one unified school district produced unanimous agreement that ACE should be explored and that the districts would cooperate enthusiastically if funds for stipends could be acquired either internally or externally.

Follow-up meetings with administrators from several schools confirmed their strong interest, though some principals feel the parallel program, in which a single intern would have part-time involvement in a school over an entire academic year, might be better for their pupils and for the aide. Several principals may combine funds to create one ACE internship, or regular 30-hour aide positions may be reserved for co-op students; on the whole, any substantial number of ACE educational interns will have to be supported by monies from sources other than district budgets.

An important meeting was held with city administrators from two adjacent municipalities. Accompanied by the chairmen of the political science departments from each campus, the Research Team met with two city managers and their personnel directors. Because of experience with several of the local four-year college field programs, the city personnel were conversant with internship activities in public administration.

The central concern of the political science faculty was the genuine ability of the cities to provide quality experiences which would expose student interns to responsibilities above an entry level and entail more than routine and repetitive activities. One person cited the values of internships for students serving with a legislator in Washington, D.C. for a summer and suggested the same level of experience ought to be our objective.

The city administrators were interested in establishing internships but pointed to certain constraints. The most immediate problem of the cities, like the school districts, is funding for intern stipends. Since such positions add to the overhead cost of city management, they must be built into the annual budget for council approval; this necessarily presumes that there will be a "payoff" for the city. A second observation of the city participants was about the large number of four-year and graduate students from nearby institutions seeking similar internships, often with sophisticated classroom training and sometimes previous experience.

No internship field experience in public administration is anticipated for the fall of 1974; one or two positions may be created during the academic year, however, and continued meetings with the city administrators are planned.

Several ACE placements will be operational for the fall term, 1974, and others are in serious negotiation with prospective employers.

One student is now employed in the international accounting department of a very large manufacturing firm; she will continue in the position through December.

Two students have been offered opportunities as counselor associates with a private mental health agency. One man will serve in a board and care home and a mature woman will serve in a day care center for adult clients. Although the stipend is very small, the students are seeking practical experience and feel they can devote the time required.

Four minority students will begin a three-year training program at a major university-affiliated research center in September. While two students are studying on campus, their counterparts will be assigned to a research laboratory.

A local electronics manufacturing company has offered positions for three to four test specialists, but the offer is in suspense due to a recent, sudden manpower freeze. All indications suggest that these openings will probably not become real until January, 1975.

The telephone company has also announced openings for alternate co-op students, seeking male service representatives and female installers. Again, manpower freezes and an impending union walkout have precluded selection of student participants, although the company has received and reviewed a number of applications. It is our hope that these positions will open as early as September, 1974.

A major retail merchandise company has offered two or three accounting clerk positions in their Northern California headquarters, and applications from students were forwarded for their review. To date, the company has held no interviews with those applicants.

These and other potential internship options, some of which are summarized on the next page, represent those contacts where discussions of the ACE program have produced serious employer interest.

ACE INTERNSHIPS

July, 1974

Student Major	Position	Type of Employer	Description
Accounting/Business	Foreign Shipments Clerk	Manufacturer	Filled 6/74-12/74. Costing, posting, 10-key adder, invoices.
Accounting/Business	Accounting Clerk	College District	30 hrs./week; three months. Type warrants, audit invoices, prepare batch totals.
Accounting/Business	Accounting Clerk/ Authorizer (2-3)	Retail Sales	Three months. Typing, 10-key, entry-level accounting, authorizing.
Business/General	Service Representative (2-3)	Phone Company	Males only. Six months. Customer complaints, public contact, clerical work.
Business/Social Science	Enabler Assistant	College District	Six months. Data gathering, reception, phones, correspondence, assist handicapped students.
Electronics	Test Specialist (3-4)	Electronics Mfg.	Three months. Test components and instruments.
Electronics	Technician Trainee (4)	Research Center	Three year program; six month rotations.
General	Installer (2-3)	Phone Company	Female. Five + months. Wiring, repairs, climb poles, meet customers, handle reports and forms.
Social Sciences	Client Counselor (2)	Mental Health Agency	Hours/duration variable. Facilitate groups, assist team with planning, working with clients

Students

Assessing students' interests accurately was identified in the beginning of the project as a central research problem, but the Research Team was well aware of the danger of arousing students' interests and hopes without establishing the groundwork necessary to fulfill their expectations. Further, student interest in the parallel work experience program and other field opportunities has been growing within this district and at other institutions around the country, suggesting that a program supported by faculty, administration and employers should be enthusiastically received by students.

Efforts were made to assess students' reception of the ACE concept. Two students served on the Task Force and although their participation was minimal, the opportunity was provided for student input. [When one of these persons, a student body officer, announced in the first Task Force meeting that he would accept immediately if an attractive ACE experience were offered him, it seemed to suggest that at least some students would be very interested in an alternate co-op model.]

Most students coming to the Cooperative Education Office for information, counseling in parallel work experience and other purposes were polled informally on their attitudes toward ACE, as were former students returning for counseling and social visits. Recognizing that this drop-in traffic overrepresents the students of the two campuses seeking or involved in some type of field experience, it helps to note that no student questioned felt the proposed alternate program would not work.

Visits to several classes, one of recreation majors, one sociology for women section, and two vocational planning classes for women, also gave us a sense that ACE appealed to students. Two or three students out of each group of 25 or 30 followed up with formal applications, though all were clearly appraised of the tentative, exploratory nature of the project. Inquiries also came from students who read an article in the De Anza College student daily newspaper.

Over the past six months a student recruitment, screening, placement and coordination process has been developed. (Sample student and employer agreements, evaluation forms and a student application are in Appendix 3.6) While the process works well now, Part 2 presents recommendations for improving the conduct of activities for an expanded program.

Basic characteristics of the present process are these:

1. Students are referred to the ACE program by teaching faculty and other college staff.
2. Students make application for the ACE program, not for specific internships.
3. Interns are selected by employers from a pool of applicants referred by the ACE staff.
4. Students are counseled to integrate field experience into long-range educational/career plans.
5. Students are counseled by faculty coordinators before, during and after field placement.
6. Students are required to meet defined, written program standards and responsibilities.
7. Students receive academic credit for the learning acquired through the internship if they accomplish the learning objectives established in consultation with the instructor/coordinator and supervisor, and if both evaluate the student's performance positively.

In addition to referring students to further course work, to placement offices, to counseling, to parallel work experience, and other appropriate resources, the Research Team would like to be able to refer some students to career preparation workshops before sending them to employers as possible interns. Many applicants to the program are unfamiliar with career trends, work responsibilities, resume preparation, interviewing, human relations on the job, and related topics. Existing guidance courses in vocational and educational planning cover some of the needed knowledge and skills, and may be modified to fit the needs of ACE applicants.

Over 60 students filed formal ACE applications during the spring and early summer months. Some of these people were referred by faculty and placement personnel at the request of the ACE Research Team as pilot placements were developed, but many were interested in the concept and wanted to have an application on file. Several faculty members and the placement officer on one campus have been very helpful sources of referrals.

Inspection of these applicants reveals that most of them are young; they are nearly evenly divided by sex; they are primarily from one campus; only five have had previous work experience; two hold AA and 5 hold BA degrees; the number of units they have completed varies widely.

STUDENT APPLICANTS FOR ACE
(n=64)*

Age	20 or less	21
	21-30	29
	31-40	7
	41-50	4
	51+	3
Sex	Female	35
	Male	29
Ethnicity	White	43
	Non-white	8
	N/A	13

# Units Completed	N/A	10
	0-25	6
	26-50	15
	51-75	19
	76-100	9
	100+	5
De Anza College		15
Foothill College		48
N/A		1
Prior degrees	AA	2
	BA	5
Previous WEXED	Yes	5
	No	45
	N/A	14

* 8 of these 64 are presently inactive
1 is a current ACE intern
4 are working full-time
1 is working half-time through another field experience program
Excludes 10 minority applicants for a special program

To document student interest in alternate co-op experiences, acceptance of creditable field experiences and awareness of interrelated study and work generally, the mail survey form [in Appendix 3.3g] was designed. The results of this survey are summarized on the next few pages. The questionnaire was mailed to every tenth person in the total district Winter Quarter student population, day and evening. All parallel work experience (WEXED) students, except those in special and clinical programs were surveyed as well.

SUMMARY OF STUDENT SURVEY RESPONSES

Characteristics of Respondents (n=844)

Sex	Female	46%	(390)	Age	Under 25	44%	(368)
	Male	54%	(444)		Over 25	56%	(465)
Married		46%	(378)	Veterans		37%	(287)
Single		54%	(482)	Non-vets		63%	(482)

Ethnicity		
Native American, Indian	.5%	(5)
Afro-American, Black, Negro	2.3%	(20)
Asian-American	3.7%	(32)
Chicano, Mexican-American, Spanish-American	4.2%	(36)
White, Anglo	80.8%	(682)
Other, no answer	8.1%	(70)

Financial Aid Qualifications			Student Status (Full-time=12 or more units)		
Yes	15%	(124)	Full-time day	31%	(264)
No	44%	(369)	Part-time day	11%	(92)
Think so	12%	(105)	Full-time evening	12%	(102)
Think not	27%	(228)	Part-time evening	32%	(272)
No answer	2%	(18)	Day and evening	8%	(71)
			no answer	5%	(43)

Majors or Career Programs Most Frequently Indicated (n=842)		
Business	18%	(152)
Biological/Health Sciences	14%	(117)
Engineering/Technology	13%	(109)
No major/career program	29%	(244)

Presently enrolled in WEXED (Parallel Work Experience)	29%	(247)
Presently not enrolled in WEXED (According to questionnaire code)	71%	(597)

Student Survey Item Analysis

A. Frequency and Reasons for "Stop-outs" from College

1. Never stoppped out	42.4%	(346)
Stopped out	57.6%	(470)

2. Rank Order of Most Frequent Reasons for "Stop-outs" (Multiple reasons, excluding "other")

a. I had to make money	32.5%	(199)
b. I needed time to deal with personal/ family matters	19.5%	(165)
c. I was overworked going to school and working at the same time	16.7%	(141)
d. I was tired of going to school and needed a break.	14.3%	(121)
e. I went into the military service.	11%	(93)

B. Should Colleges Give Credit for Learning through Field Experience?

	Yes	No	No Answer
In full-time jobs	82%	12%	6%
In part-time jobs	85%	9%	6%
In paid jobs	87%	8%	5%
In volunteer jobs	80%	10%	10%

C. Present Work Involvement?

Full-time	51%	(426)
Part-time	24%	(205)
Volunteer	2%	(16)
Not working	19%	(162)
No answer	4%	(35)

D. Interest in Full-time, Paid Employment During College (Internship)?

Yes	69%	(584)
No	14%	(205)
Maybe	14%	(121)
No answer	2%	(21)

Rank Ordered Reasons for "Yes" Answer to Above Item (Excluding "other")

a. I think I could learn things on a job that I can't learn in school. (483)
b. Experience now will help me decide if I want to continue in the career I am considering or have chosen. (426)
c. Experience now will help me get a better job when I complete my certificate, degree or program.
d. I need to make money during my college years. (358)
e. It's hard to get a job in my field without experience. (280)
f. Experience now will help me transfer to a four-year college. (132)

Comparing the self-reported characteristics of the student survey respondents with data on all students in the district (Appendix 3.2) reveals that the mail survey sample represents the total population reasonably well, although some distortion exists. Present parallel work experience students are overrepresented in the sample because a separate mailing was made to this population (excluding about 250 students in special programs). Respondents slightly underrepresent minority students and women, and may overrepresent full-time students. [Veterans may also be overrepresented in our sample. In addition to the 14% of the student body who are assisted by the Veterans Affairs offices, there may be many veterans on the campuses who are not so identified. It also seems likely that veterans returned the questionnaire for more frequently than other students.]

Not surprisingly, the nearly 60% who interrupted their education for more than summers most frequently cited "financial need" as a reason for "stopping-out." Other frequent answers indicate that personal and family matters, pressure from simultaneous study and work, and "needing a break" from school greatly influence student decisions to stay out of college for a term or more.

One must remember that community college students are often different from other undergraduates. Many are married, many are mature, many work while going to school. Most see the colleges not only as places to earn degrees or certificates, but as community resource centers to be used as need or interest arises; students no longer seem to expect to spend two years on an Associate degree, or four years on a BA or BS, as a matter of course.

The heterogeneous nature of the community college student population may explain some survey findings. Our students are highly supportive of college credit for "learning which occurs through a field experience with an agency or employer off-campus," and 80% or more think both full and part-time, paid volunteer workers should be awarded academic credit for this kind of learning. Sixty-nine percent indicate that they would be interested in an internship which was full-time and salaried. These answers make sense when we realize that 51% of the respondents are presently full-time workers and another 24% work part-time.

Articulation

Community college faculty and staff must be aware of the needs and experiences of students entering their colleges from secondary schools or other collegiate institutions and students transferring to continue their education at other colleges and universities. Cooperative educators have a particular responsibility to work closely with secondary educators and counselors and with other higher education personnel, or co-op programs may not be accurately perceived and evaluated.

Aside from brief and informal discussions with secondary school work experience coordinators and one presentation to a large gathering of counselors, secondary educators have not been contacted by the ACE Research Team during the past year since there is as yet little specific information to share with high school personnel. We intend to identify students entering the colleges with previous work experience, and assist them to continue or modify their cooperative learning pattern if they so desire. The design drafting ACE program adopted at De Anza College should attract incoming high school graduates, but it is a highly demanding academic program and is expected to have limited appeal. This program will be presented to high school students, their parents, counselors and teachers during the next year as one of a series of educational options. As learning stations are developed and teachers, counselors, and work experience coordinators see the kind of education their former students are gaining through ACE, communication and referrals from secondary level personnel will improve. [Recommendations concerning this process are presented in the next chapter.]

We have concentrated on upward articulation because the attitudes and actions of various institutions of higher education in California concerning cooperative education generally, and community college cooperative work experience programs specifically, are quite complex. Some private colleges, such as Golden Gate University, a proprietary institution in downtown San Francisco, have extensive cooperative education programs, intensively recruit community college transfer students and evaluate their previous field experience units fully and fairly. Many private colleges have greater flexibility, greater interest in individual students, and stronger motivation to recruit community college cooperative education students than do most public colleges. However, as enrollments stabilize and in some cases decline at the state university campuses and the campuses of The University of California, interest in cooperative education and concern for tranferring students is rapidly growing.

Presently community colleges have far more experience in operating co-op programs than do the large institutions such as UC Berkeley and UCLA. Many four-year personnel seek the advice of community college directors and coordinators about program standards, evaluation, cooperative employers and other matters.

Further, Executive Order 167 issued by the Chancellor of the State College and University system in 1973, requires the state colleges to accept courses certified by the community colleges and agreed to by the state colleges as baccalaureate pattern courses. Now, when a community college certifies parallel or alternate cooperative education units as creditable toward a baccalaureate degree, the colleges and universities in the State University system will credit transferring students with these units, or defend their refusal to do so with an arbitration committee.

The University of California campuses have been working on a system-wide policy on field experience units which is expected to include guidelines for evaluating transfering students' cooperative education units. This past spring UC Berkeley announced a 10-unit limit on credits earned through field study by undergraduates: It remains to be seen if this limitation will be final or how it will affect transfer undergraduates; state regulations allow California community colleges to award a student up to 16 semester or 24 quarter units for field experience.

The Research Team has worked with representatives of several four-year institutions to establish formal articulation agreements for the transfer of credit by co-op students from this district. We expect that continued early discussions in the Fall of 1974 will result in the development of acceptable agreements, which may be models for negotiations with other institutions. Some examples of the discussions to date are worth noting.

1. A long-established, private, four-year university in the Central Valley with a tradition of cooperative education in its Engineering school and four other disciplines has defined lower division pattern requirements for native and transfer students. They have verbally concurred with acceptance of cooperative education units of credit from this district's engineering departments and will enter into written arrangements. In addition, during the coming year there is the potential for a sharing of job placement opportunities for students to the extent that the University will announce to this district's Cooperative Education Office openings in the greater Sacramento region for which our students can qualify and the University will "share" some of its co-op openings. The advantages for students are obvious: The opportunity to engage lower-division transfer course work on a community college campus at lower cost while residing at home; the opportunity to enter a co-op station which may continue after the student transfers to the University; the opportunity to "establish a track record" with the University by performing well at the job site. To reciprocate, this district's Cooperative Education office has offered to perform field visits and evaluative observations in behalf of the University and to assist students who are in field assignments in this area when that service will be beneficial and helpful to the University.

2. A large campus of The University of California engages in an extensive quarter-system cooperative field experience program. While a large number of the student experiences are in low- or non-paying positions, others are responsible positions with good stipends or salary. Again, our discussions with the field experience administrators at that campus suggests that acceptance of co-op credit will be an early reality and students can be counseled while enrolled in these colleges of the transferability of the co-op units. Also, we have discussed the sharing of job openings and of field coordination and believe that during the coming academic year formal arrangements can be completed to effect both these options.

3. A private four-year liberal arts college in the state of Washington will receive any AA degree-holding transfer student from De Anza or Foothill College as a full-standing junior, will accept the maximum number of co-op units awarded by these campuses and will enroll them into their cooperative field experience program immediately upon matriculation and place them in a job during the second term of attendance. In addition, students transfering with the recommendation of the cooperative education office who have completed two years of academic work but who may not have met specific degree requirements will also be admitted into the program. The University and this district have also discussed the assignment of students to field placements in the other institution's geographic area, the exchange of field coordination and the sharing of job openings; formal written agreements will be negotiated during Fall, 1974.

4. Discussions are in progress with a church-related four-year university in Alaska to establish a unique educational model for cooperative students. Students from this district and the University would "exchange" for one academic year. Although enrolled formally on their own campus, students from California and Alaska will attend classes and complete course work on the campus in the other state; during alternate quarters they will work out in field experience assignments. Operating under the academic supervision of adjunct faculty and of the cooperative education directors for the one-year period, students will receive full credit for their studies from their home institution but have the advantage of exposure to another geographic area, to an otherwise-unavailable field experience placement, and to a different cultural/social environment. The writers hope that formal arrangements to effect such a plan will be completed within a few months. [A similar arrangement has been discussed with a large mid-western University with a broad option of field experiences in business, engineering and the social services, but the recent resignation by the director of the University's co-op program will necessitate renewed discussions.]

These illustrations represent a number of similar discussions which have been held, formally and informally, during the past several months. The most compelling reason for establishing any articulation patterns is to facilitate student long-range planning. Students entering the community college as freshmen should have several options available so that as they move through a curriculum pattern they can plan ahead carefully, even in the event of a change of major.

PART 2

ACE RECOMMENDATIONS

In this chapter, the Research Team presents the recommendations of the Task Force and a series of recommendations for ACE implementation and long-range program development which are based upon the research findings. Items deserving immediate attention and long-term goals are included. Discussion sections following each set of recommendations present our rationale for these proposals.

Task Force Recommendations

On April 30, the Alternate Cooperative Education Task Force adopted the following statement.

> The Advisory Task Force endorses the concept of three-month and six-month Alternate Term Cooperative Education field experiences for students seeking to combine educational classroom theory and concepts with real-time career development or career exploration opportunities. The committee feels that field experiences show genuine educational value when closely coordinated with an academic program and career counseling, and when such experiences are supervised by members of the teaching faculty in a clearly-defined tripartite affiliation among college, student and employer.
>
> The Task Force Recommends:
>
> 1. That the Research Team for Alternate Cooperative Education execute the pilot model proposed in the HEW-funded Grant Project commencing with the summer term of 1974, accommodating students from both DeAnza and Foothill Colleges in several distinct career majors. Further, the focus of the placements should be on the target populations of students defined in the grant proposal. Such implementation should be managed by the Research Team out of the Office of Technical Education in cooperation with the Deans of Instruction and faculty on each campus.

2. In recognition of the April 18, 1974 action of the Board of Governors of the California Community Colleges authorizing the 8-unit Alternate Cooperative Education Plan for California colleges, that the Research Team prepare recommendations to the Curriculum Committee at De Anza and Foothill Colleges to include two 8-unit field experience options in course offerings as a counterpart to the existing four 4-unit parallel Work Experience options.

3. That the Research Team exert continued effort and engage in appropriate additional activities to develop job placement in full-time Alternate Field Experiences for students throughout the 1974-75 academic year.

4. That the Research Team, working with faculty in the academic divisions, design and recommend appropriate curriculum accommodations for field experiences in several academic programs; particularly for career fields in which job placements are developed.

5. We further recommend that the Research Team develop a 5-year Master Plan for continued development of ACE alternatives, subject to annual review and evaluation by the Advisory Task Force.

Research Team Recommendations

In the context of these broadly-defined guidelines from the Task Force, the following detailed recommendations are presented. These recommendations will be submitted to college and district personnel as appropriate, and will guide the 1974-75 implementation effort.

Employer Relations and Internship Development

Recommendations. Effort should be expended to . . .

1. Employ a full-time specialist in employer relations and internship development, with responsibility to develop positions particularly for (a) economically disadvantaged students, women, veterans and handicapped persons, and (b) social science and liberal arts students.
2. Establish a systematic method of contacting and following-up prospective ACE employers.

Discussion. Our findings and data, both formal and informal, suggest that Bay Area employers, and particularly those in Santa Clara County, are generally supportive of in-service and continuing education but have little personal exposure to the classic cooperative education model of full-time, short-term paid internships alternating with on-campus terms. It takes time for corporate officers to absorb the ACE concept and adapt it to their organizations. As models become operational, the internship development process should "snowball," but employer education and development of new positions will be continuous, integral elements of ACE. Our experience this year indicates that working with employers demands great time, energy, skill and patience.

These conditions suggest that a specialist in employer relations and internship development should be added to the ACE staff, with overall responsibility to (1) educate employers and community members about ACE and other field experience and career opportunities offered by the two colleges, and (2) develop as many challenging, responsible cooperative learning stations as possible. The appointment of this individual will enable others to concentrate on program development, administration and research. This person must meet and communicate effectively with various people, represent the program and the colleges accurately and enthusiastically and interface with multiple personalities and organizational structures. S/he will have the responsibility of providing high-quality learning opportunities for students, realizing that these opportunities will come only from employers for whom co-op students are useful employees.

Employers' needs for productive student-employees affect the possibility of establishing ACE internships for some minorities, women, veterans and other students who lack desired skills. Discussions with employers lead us to conclude that affirmative action efforts are very real, but employee skill and ability remain their primary concern. Intensive staff effort and, possibly, additional funds for student stipends may be necessary to provide a desirable level of service to students with special needs.

Outside funds for students' stipends may also be required if any substantial program involving non-profit, public service organizations is to be maintained, as it has been our experience this year that most non-profit organizations and government agencies have great difficulty paying student interns even modest salaries. We may move toward some volunteer ACE interns, particularly if they receive special in-service training, admission to conferences or other considerations in lieu of pay, but we hope that public service employers will find ways to include interns in their budgets as positive experience with the ACE program accrues.

Much time and energy has been given to some companies and agencies which may employ ACE interns,and not enough to others; relations with employers need to be developed more systematically. Internships have not been thoroughly explored with several groups of employers. These include past and present employers of parallel work experience students, advisory committee members, co-sponsors of the National Commission for Cooperative Education Conference held in San Francisco in June, and respondents to the employer survey. A package of materials to mail to these and other employers would provide a foundation for subsequent individual and group meetings.

Student Relations

Recommendations. Effort should be expended to . . .

1. Refine and conduct the recruitment, screening, placement coordination functions with greater efficiency.

2. Make presentations to classes, clubs and organizations about ACE and field experience generally.
3. Produce media releases, brochures, newsletters and perhaps radio and TV coverage to publicize the program.
4. Develop procedures for reaching incoming students from feeder high schools before they become freshmen.
5. Develop greater understanding of ACE and better communication with the ACE staff among teaching faculty, counselors, and the personnel of the Veterans' Offices, Multicultural Offices, Placement Offices, and other student service centers.

Discussion. Working toward broad knowledge of the program is a continuous process. Our long-range goals are to help all students understand ACE and to enable as many as desire and can benefit from co-op internship experience to incorporate ACE into their educational programs. A more immediate goal is to move as quickly as possible to open announcement of internship positions and screening criteria for ACE interns, so that students are not arbitrarily or accidentally closed out of the program. A caution is in order: Because students' expectations could be unfairly aroused if we advertised widely but had only a few openings, the growth of the program will dictate how soon we can "go public." We further must help students understand that no one educational option will accommodate all students or meet all the needs of particular students.

Early in the investigation process we discussed the ACE project with four classes to informally assess interest in the alternate plan. These discussions guided our thinking about the student survey. Arrangements have been made to present the ACE program in the fall to a guidance class for handicapped students, and discussions have been held about a session at the Women's Opportunity Center at De Anza. In addition to presenting the program to these and other special interest groups and classes, the Team will continue to respond to student requests for presentations to student government groups, clubs and organizations.

A report published in March in the De Anza student daily newspaper stimulated several inquiries from students and comments from faculty and staff; several stories are to be published next year in the student papers at both colleges. As need develops, the existing one-page information sheet on ACE (Appendix 3.6a) may be modified into a brochure [similar to an existing parallel work experience brochure] to be widely distributed on the two campuses and in the communities. Both programs will also be described in a newsletter to be circulated to co-op students, employers and supporters. These forms of publicity may be augmented by radio and TV coverage; Foothill College's radio station is accessible and local TV stations frequently cover educational developments in the area.

Procedures should be designed to reach students coming to De Anza and Foothill from feeder high schools, particularly students who already have some cooperative work experience. In developing an educational master plan for two, four or more years of study, students could anticipate several work terms and expected income in their planning. Some students may be encouraged to enter college who might otherwise think immediate full-time, permanent employment is their only realistic option upon graduation from high school. All articulation efforts will require close interaction with secondary level work experience coordinators, counselors and other staff; De Anza and Foothill co-op students can assist in this information-sharing/recruitment process.

College Staff Involvement

Recommendations. Effort should be expended to . . .

1. Identify key faculty and staff members in non-traditional co-op areas and work intensively to help them understand the philosophy, advantages and disadvantages of ACE and other field experience programs.

2. Publicize generally the curricular models and experience of initial ACE students, so that instructors can learn about specific ACE curriculum designs and students' learning experiences.
3. Work with faculty, division chairmen and curriculum committees on both campuses to establish ACE courses in every discipline.
4. Encourage faculty, and particularly counselors, to help students with career planning, and aid these staff members to appropriately counsel and refer students to field experience opportunities.

Discussion. Many social science and liberal arts faculty members, and other instructors who themselves have little work experience outside academia, need guidance and encouragement to learn about field experience plans, identifying measurable learning objectives and evaluation. They also need to be aware that the instructor-coordinator's responsibilities are critical. Support staff and counselors in placement, multicultural affairs, handicapped students' programs and other such vital areas must understand both the philosophy and mechanics of ACE.

The design drafting curriculum at De Anza and the ubiquitous ACE courses adopted at Foothill should be highlighted in faculty meetings and newsletters, as should brief summaries of the experiences of ACE pioneering students. Presenting this information in reasonable detail will allow faculty to think of how ACE could be incorporated into their academic areas and help their students.

The ACE staff should begin early in the academic year to encourage instructors, division chairmen and members of the curriculum committees to discuss discipline-centered ACE courses. We believe a social science course labeled Social Science 90, Alternate Cooperative Internship, will more accurately describe sociology, anthropology and psychology students' experiences than a general cooperative education course open to students in all majors, and that the units acquired through this elective would transfer to senior institutions much more readily than do general work experience credits.

In addition to publicizing the ACE program operation and assisting the creation of courses and curricula, the ACE Team will encourage staff, faculty and counselors to help students create long-range learning plans including some real-world experience and skills. Whether or not these are gained through a cooperative program, it seems important to break down the school/work dichotomy and help people see learning as a life-long process.

Articulation

Recommendations. Effort should be expended to . . .

1. Acquire clearer understanding of articulation policies of the University of California, the state colleges and universities, and private colleges, and substantiate these policies with formal written agreements about cooperative education transfer.
2. Establish close interaction with secondary school instructors, counselors and work experience coordinators, supporting their programs and relationships with employers and encouraging their referrals of students and prospective employers.

Discussion. Articulation upward and downward will always concern the ACE staff. Working with members of local chapters of the California Association of Work Experience Educators and others active in career and cooperative programs at the secondary level should lead to improved coordination of secondary and community college programs; a few students may be able to co-op for the same employer during their high school and college years.

After leaving De Anza or Foothill some students would like to continue to co-op while they are juniors, seniors or graduate students, but few of the senior colleges (especially the public institutions) have well-established, high-quality field programs. However, many are trying to establish cooperative programs, and we should follow their efforts carefully, referring transferring students as opportunities develop. As the previous discussion of articulation illustrates, the Research Team has established some important communication lines and acquired current information to give students. We must continue to seek information about senior college policies and practices as they develop, or students with ACE and other field experience units may suffer transfer depreciation or lose chances to continue cooperative learning.

Program Evaluation and Dissemination

Recommendations. Effort should be expended to . . .

1. Develop follow-up procedures for ACE interns and participating employers.
2. Conduct an informal program evaluation and review session with all ACE staff, including coordinators, once every quarter.
3. Acknowledge employers' contributions with certificates or letters of appreciation.
4. Publish and distribute summary reports and descriptions of the ACE project, brochures, newsletters and other communications.

Discussion. A follow-up study of all participants is essential to a responsible program. In addition to trying to learn about middle and long-range effects of ACE internships on students and on employers, it might be useful to try to follow-up some instructors' experiences, particularly if they have referred students to the program and/or modified their courses and curricula in response to ACE.

We need to be explicit about our self-evaluation process, particularly if more staff work with the project. Meetings of all staff at least quarterly could be most useful. Coordinators especially need to respond to the overall program and share with the co-op office their experiences with students and employers in the field.

Letters of recognition to organizations are useful expressions of appreciation for support and increase communication between the colleges and the community. Newsletters and press releases should be prepared and disseminated.

Employers should be included on the distribution list for newsletters and other communications, and may be given copies of article reprints or reports which help them better understand the program and their role in it. Such materials should circulate widely to instructors and staff on the two campuses, and to visitors and colleagues from co-op programs throughout the country who write or visit to learn about our experiences.

Institutionalization

Recommendations. Efforts should be expended to . . .

1. Consider ACE as but one option in a range of field experience programs.
2. Work toward integration of field experiences and career services in all possible ways.

Discussion. If field experience and career education programs are primarily intended for students, and secondarily (though very significantly) designed to meet institutional and employer needs, carefully coordinated counseling, placement, referral and curriculum development are essential. Colleagues from western states have informed us that when alternate co-op is but one of several plans, and especially where little job development is undertaken, parallel placements dominate co-op thinking and operation. While in California ACE requires intensive effort in job development and internal education of faculty and students, it should not be isolated from other career education services. Some students will need to take on full-time, permanent employment and continue their studies at night because experience and income they require is available no other way; others will find that concurrent work and study help them learn more and maintain balance in their lives. Centralized screening, counseling and referrals would serve students more effectively, reduce duplication and inefficiency, and meet employer and institutional needs far better than present scattered, uncoordinated efforts.

Some California community colleges, such as Orange Coast and Moorpark, have developed Career Service Centers which integrate all career-related services and programs into one centralized operation. Cooperative education is central to these models: it is the basic bridge between the campus and the community because it helps students create individualized learning programs which meet their needs, abilities and long-range goals. Co-op students also use support services, such as vocational testing and counseling career information and financial aid. An integrated center makes it far easier to meet each student's needs appropriately,and coordinated job development makes it possible to obtain more jobs and learning stations for all types of students.

PART 3

BACKGROUND INFORMATION AND APPENDICES

3.1 Cooperative Education in California Community Colleges

Several good publications, particularly Knowles' Handbook..., Heermann's recent Cooperative Education in Community Colleges, and Barbeau's dissertation cover the history and philosophy of co-op in the national context. [These and other works are cited in the bibliography.] It would be redundant to repeat this material, but it may be helpful in this report to discuss the distinctive nature of experiential programs in the California community colleges. Readers may want to compare patterns in different states and regions; they should also know that potential employer attitudes and experiences with co-op seem to be rather different on the West Coast than in other parts of the country.

This section describes the nature of California community colleges, their role and function within the state system of higher education, and the educational dynamics of cooperative education. Part 3.2 focuses briefly on the organization and environment of De Anza and Foothill colleges so the reader may better understand some aspects of the earlier writing and the recommendations for development of alternate cooperative education patterns.

Throughout the country, the most prevalent forms of cooperative education are five-year and four-year baccalaureate programs and two-year community college plans. In the prototype five-year pattern, theoretically paired students share a learning station; after completing required preparatory academic work, they rotate regularly between full-time college study and full-time employment until they complete degree requirements. These patterns are found most often in engineering and other technical programs.

Four-year plans are prominent in liberal arts colleges where less exposure to the work environment is expected. Four-year programs emphasize summer internships, single-term "work-outs" and other variations in the number and length of work periods, while trying to maintain a four-year graduation time line.

Two-year community colleges often practice a type of co-op known as "concurrent" or "parallel" through which students who attend college and are employed full or part-time in a work role related to their academic program may receive credit toward their degree or certificate for learning that occurs through the job. This pattern is common in California and other parts of the Far West, though it raises some eyebrows among traditionalists in other regions. Joseph Barbeau of Northeastern, for example, discounted the legitimacy of the parallel plan when writing in his history of co-op:

> Obviously, not all work experience, even if related, is considered cooperative education. Such things as related part-time employment, internships, student teaching and some types of "interlude" programs are examples of those kinds of programs not included under cooperative education. (p. 12)

Fortunately, this narrow view is not prevalent either with the California Community College Chancellor's office or the U.S. Office of Education. Most parallel programs meet the basic criteria and guidelines for integration of classroom learning and practical experience in organized programs.

Among the characteristics central to most cooperative programs and all traditional alternating plans are the following:

1. The field experience should be very closely related to the student's academic major and career objectives;
2. The experiential learning should closely parallel the student's academic progress, and become increasingly more challenging and responsible as the student moves toward a certificate or degree;
3. Academic standards and measurable performance should be objectively defined to insure the academic integrity of the learning process; and
4. The employment should be full-time and continuous over a specified period of time. [This latter characteristic is the major distinction between alternate and parallel models.]

California two-year college cooperative work experience education programs are, with few exceptions, parallel plan operations; only about one dozen of the 100 public community colleges have both an alternate and a parallel plan, and the number of students enrolling in alternate programs in any college is small. Traditional co-op disciplines such as business, engineering, allied health, agriculture and technological fields are well represented in all programs. Opportunities for modest numbers of students to gain experience in public and social services are expanding, but most of these involve volunteer placements or federally-supported work-study positions.

The Nature of California Community Colleges. It is important that readers of this report understand the California community colleges if they are to appreciate the dynamics which operate in planning for student educational needs and community acceptance and participation in the educational processes. This state with the largest number of public community colleges and largest number of students enrolled (exceeding one million in 1973-4) operates its community college system as a legal extension of secondary education and, simultaneously, as a participant in the higher education Master Plan.

Local college districts with independent, autonomous boards of trustees maintain, and to a large extent financially support, community college districts and campuses under the jurisdiction of common school laws of the state. They are responsible to the Board of Governors and the Chancellor of the California Community Colleges for certain functions, but by law are specifically and directly responsible and accountable to the local electorate.

Unlike the state college/university system or the University of California, community colleges do not depend solely upon annual legislative appropriations for financing their programs and campus development. Two sources -- local taxes and state foundation programs -- provide nearly 90% of all monies flowing into the colleges, the balance coming from designated Federal funds and grants. While in the past the state has met approximately one-third of the total expenditures for community college operations, the rapid expansion in both numbers of campuses and numbers of students has forced a greater burden upon local taxpayers. Under the most recent funding legislation the average basic state foundation program is $528 per student; local property tax rates not to exceed 35¢ per $100 assessed valuation provide the balance to meet the average statewide expenditure of $1028 per ADA [Average Daily Attendance] 1973-4. In those districts where assessed valuation is so low that the required tax rate will not produce the total income allowable per ADA, the state makes up the difference. Community college students do not pay tuition; student body fees and insurance premiums in this district are $7 each of four quarters; the major expenditures are for books/materials/supplies and transportation to the campus.

Since the implementation of the California *Master Plan for Higher Education* in 1959, the community college has been placed in a responsible tripartite affiliation with the California State College and University system and the University of California system. Charged by the California State Legislature to fully articulate and integrate the work of all segments of higher education in the state, the authors and designers of the *Master Plan* gave community colleges a dual role: (1) to prepare students with thorough foundations in educational courses which will transfer with full credit and adequate background into the upper-division studies at the four-year receiving institutions; and (2) to accommodate an increasing number of students seeking specialized, career-related, less-than-four-year college preparation.

There are today 100 campuses of the California Community College system in 69 districts; several, therefore, are multi-campus districts. These colleges enroll over 70 percent of all first-time freshmen and sophomores in California public higher institutions. There are 19 campuses of the California State College and University system and nine campuses of the University of California. Given the availability of the disciplines into which s/he wishes to transfer, the achievement of the entry-requirements, gradepoint average and completion of the common lower-division core and general education requirements, virtually any student may transfer from one of California's community colleges into one of its four-year receiving institutions. The preparation of most transfer students is also sufficient to gain admission to one of several dozen private four-year universities in the state represented by such institutions as the University of Pacific, Stanford University, the University of Southern California, California Technical Institute, the Pomona-Claremont-Scrips complex, and a host of outstanding church-related or founded colleges and universitites.

Cooperative Education in California Community Colleges. Student participation in cooperative education in California community colleges is sanctioned by the Education Code and The California Administrative Code. Regulations and guidelines as to academic prerequisites, academic credit, program standards and conduct and participation of students, employers and college personnel are detailed.

Most students are attending school and working. A large number of student participants who come to the cooperative education office are employed at the time of applying for program admission; others come into the program through the job placement efforts of the cooperative education office, the placement service, the financial aids office and other similar student career counseling services available on campus. When a student meeting academic standards and guidelines has been admitted to the program, a member of the faculty is assigned as the field coordinator. Almost immediately the coordinator, student and job supervisor sit together to prepare mutually acceptable, measurable, education/employment performance objectives. Throughout the term, coordinators visit with the student both on the job site and on campus, and with job supervisors. At the end of the term both the job supervisor and faculty coordinator prepare an evaluation of the student's success in meeting performance objectives,and this is one basis upon which a grade is awarded.

By far the largest number of co-op participants are in paid employment experiences directed related to their academic study; others, however, are working in volunteer and social service agencies and some students are in fields of career experience development not necessarily related to their academic program. All types of co-op participation, however, fall within the broad umbrella of field experience education which includes such other programs as medical and clinical internships and preceptorships, management internships and similar programs.

Since 1970, the number of California colleges with co-op programs has increased suddenly and dramatically, primarily because of financial support provided by the Vocational Education Amendment Act of 1968. Unprecedented seed money became available which encouraged presidents, deans and other administrators to explore the cooperative concept and its values to students and colleges. In the fall of 1973 the Chancellor of the state community college system appointed a full-time specialist in work experience to his staff in Sacramento to assist colleges in planning, implementing, conducting and evaluating co-op programs. In April, 1974, the Board of Governors of the California Community Colleges authorized increased academic credit for alternate plans, which will surely encourage more colleges to add this classic pattern to their concurrent models.

One aspect of increasing concern to co-op directors in California's two-year colleges involves articulation with public and private four-year schools. A recent directive from the office of the Chancellor of the State College and University system expects the senior colleges to accept courses designated by the two-year colleges as baccalaureate transfer creditable courses; however, the number of two-year colleges identifying cooperative education courses as transferable and the number of the 19 state college/universities which have agreed to receive the units with any clear understanding of where they may be "used" in a student's educational pattern is uncertain. Indeed, within the University of California system, there is at this writing an on-going discussion and appraisal of all experiential learning -- both that conducted within the system for its students, and that conducted by the state colleges and universities and by the community colleges. In the four-year institutions, unlike the community colleges, there is no uniformity, no consistency, no pattern and no clear-cut policy on credit for experiential or cooperative learning either for transfer or native students.

Until four-year colleges clearly define and enunciate the academic credit policy regarding field experience and cooperative education, two-year faculty must exert caution in encouraging their students to accumulate large numbers of units and in what they tell students about the value of the units in transfer curricula.

Summary. Cooperative education in California has been available to some students in either parallel or alternate models in restricted disciplines at a few four-year colleges and some two-year institutions, but only in the last five years has the concept spread rapidly to nearly all the public community colleges. Despite the uncertainty of the university transfer "value" of the academic credits awarded students for their learning through work, state community college regulations authorize these credits to apply toward two-year Associate degrees and recognized career-program certificates. Growing national awareness of co-op, federal funds for research and program implementation, and more flexible state rules governing cooperative credit will undoubtedly lead to much experimentation with alternate cooperative education at all levels. While awareness and support of both concurrent and alternating patterns is growing among employer groups in the state, much more interface between campuses and communities will be essential before the widest possible range of educational opportunities is available to students. In California, as in the rest of the country, programs are expanding and changing and cooperative educators, administrative officers and faculty leaders must engage the issue of educational integrity and standards, develop widespread employer acceptance and involvement in co-op, and continue to create individualized student learning packages in which real-life employment experience is an essential ingredient.

3.2 The Foothill Community College District

The Institutional Environment. The Foothill Community College District serves an urban section of 105 square miles in northern Santa Clara County, California. Located approximately forty miles south of San Francisco at the tip of the San Francisco Bay, the 121-acre Foothill campus and 112-acre De Anza campuses in Los Altos Hills and Cupertino accommodate over 24,000 day and evening students from Palo Alto, Mountain View, Sunnyvale, Cupertino, Los Altos, Los Altos Hills, Monta Vista and parts of Saratoga. The colleges serve three high school districts. In addition to receiving students from thirteen public and three private or parochial high schools within the district, students from other areas attend the campuses upon execution of inter-district agreements.

The District began instruction on a temporary campus on September, 1958, and moved to its permanent site on the Foothill campus in Los Altos Hills in September, 1961. De Anza College in Cupertino opened in September, 1967. Both campuses are comprehensive institutions sharing, nearly equally, over 75 distinct vocational two-year degree-granting career programs, a large offering of liberal arts, general studies and pre-transfer programs for students planning to transfer to a four-year institution, and a generous schedule of general education and personal interest courses. Both campuses are surrounded by institutions of higher education. Stanford, San Jose State and Santa Clara Universities are a ten-minute drive from either campus. San Francisco State University and Hayward State University are forty miles away and the University of California in Berkeley sixty miles. Several private universities are located throughout the Bay Area.

While the area served by the colleges is largely residential, there is substantial industrial and commercial development and the region is spotted with numerous retail trading centers and complexes. Growth in population in the District during the past 25 years has been great: in 1950 it was estimated at 74,000; in 1960 at 225,000; and in 1970 at over 350,000. The District's assessed valuation was $458 million in 1960-61, and exceeded one billion dollars in 1973.

"No other center of advanced technology in the U.S. can match Santa Clara County's performance..." noted Gene Bylinsky in the June, 1974 Fortune magazine. Nearly 1,000 "technology companies" plus numerous service and supplier firms are in the County, and the Foothill District campuses are located in the densest area. Rapidly-expanding fields such as semiconductor, laser, medical instrumentation, magnetic recording, educational and consumer electronics are nearly as new as the colleges; some firms involved in these activities are branches or subsidiaries of corporations with headquarters elsewhere, but most are "home grown" industries which joined a large existing complex of electronics, engineering, aerospace, communication, computer, nuclear and scientific firms. Medical research, instrumentation and support activities plus pharmaceutical supply activities are large and increasing in scope because of the extensive operations of the Stanford University Medical Center; because of the large number of hospitals, extended care facilities and medical clinics; and because of the presence of a medical-research oriented community.

Retail merchandising activities are large and increasing. There are eight major regional shopping centers and nearly two dozen major local shopping centers in the North County in which these two colleges are located.

As the diversity of the area's commercial and industrial activities increases, so too does curriculum development and implementation at the public community colleges. The uniqueness of these colleges must be recognized to properly highlight the opportunities and advantages which they hold for their students.

Foothill College District students, therefore, enjoy a rich heritage of enthusiasm and respect for the values of higher education, the opportunity for a diversified emphasis in educational specialization, and a wide variety of options which they may exercise in selecting careers and life styles. The social milieu of Northern Santa Clara County emphasizes personal growth through a myriad of options; a premium on educational opportunities of a wide variety for individual needs and interests; and a recognition of the contribution of all expressions of career and vocational choice and self-determination.

It is from this environment that the colleges' students arrive; within this environment that the professional faculties and staff conduct their teaching and educational design; and into this environment that many of the graduates go to immediately to begin their career activities.

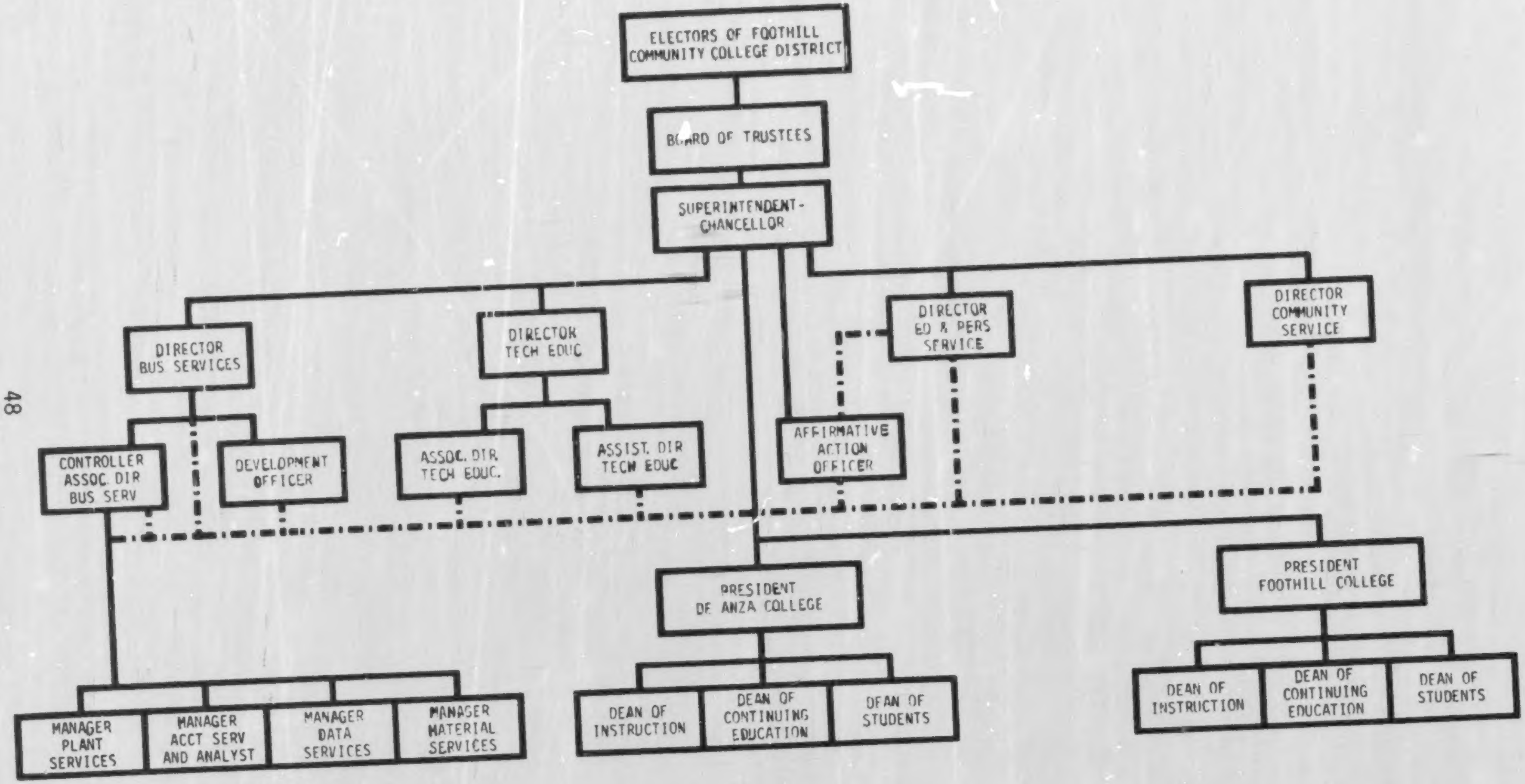
District Organization and Campus Autonomy. The Foothill College District and its two campuses operate under jurisdiction of a five-person Board of Trustees elected by voting residents for four-year terms. Central "administration" within the Chancellor's office is, in effect, support staff for the campus operations and interfaces with the campus president and deans [District organization is outlined on the attached diagram]. Campuses operate with considerable autonomy in many decision and policy areas, particularly in terms of program expenditures and curriculum development. Both De Anza and Foothill Colleges have active faculty participation in the decision-making process in several areas. A faculty curriculum committee approves courses and programs of study leading to certificates or degrees; much of the comprehensive curriculum program originates with teaching faculty who forward recommendations to the curriculum committee through their division representatives. Academic grading policies and standards are the province of the collective faculty at each college. Division council members representing teaching disciplines meet with the deans and the president to establish priorities for the expenditure of monies in the operational budget granted for their college. In each of these areas -- curriculum development, academic policies and standards, and fiscal decision-making -- the two campuses operate in different styles and arrive at different programs, standards and funding priorities.

Citizen advisory committees are used extensively, particularly in the development, operation and continuous evaluation of curricula. Nearly 50 committees meet at least once each year to assist faculty and staff in curriculum design and monitoring of vocational education programs. Other advisory committees as needed assist the individual colleges and the District.

Public acceptance and support of the colleges is strong. The campuses and their programs are so well established as an integral part of the entire state program of public education that they are treated positively by local citizens, and extensively utilized as community resources. In California, in contrast to other states, the community colleges enjoy both understanding and support from other colleges and universities in the state, both public and private. Closely integrated with the higher education mosaic of the state through carefully-designed articulation and liaison committees and activities, the two-year colleges have found four-year institutions strong allies in receiving transfer students and their academic programs and credits. This awareness and acceptance is a crucial factor in the development of any Alternate Cooperative Education program model if any significant applicability of the value of field experience is to benefit the student who transfers into another level of collegiate study.

Summary. Students for whom a Cooperative Education model might be established at De Anza and Foothill College enjoy some immediate and obvious advantages which may not accrue to their counterparts in other states. The socio/cultural milieu encourages college study and participation; there is a vast business-industry community waiting to receive students as educational interns or "finished products" off the campuses; the campuses and their faculty and administration are student-centered and active in providing rich and changing curricula; educational opportunities are available [at relatively little cost] to "...any high school graduate or any other person over 18 years of age who...is capable of profiting from instruction"; the interrelationship of the entire higher education matrix encourages students to plan a multiphasic educational program. In this context and environment the establishment of an Alternate Cooperative Education program has some distinct advantages.

FOOTHILL COMMUNITY COLLEGE DISTRICT ORGANIZATIONAL CHART


ELECTORS OF FOOTHILL COMMUNITY COLLEGE DISTRICT
BOARD OF TRUSTEES
SUPERINTENDENT-CHANCELLOR
DIRECTOR BUS SERVICES
DIRECTOR TECH EDUC
DIRECTOR ED & PERS SERVICE
DIRECTOR COMMUNITY SERVICE
CONTROLLER ASSOC DIR BUS SERV
DEVELOPMENT OFFICER
ASSOC. DIR TECH EDUC.
ASSIST. DIR TECH EDUC
AFFIRMATIVE ACTION OFFICER
PRESIDENT DE ANZA COLLEGE
PRESIDENT FOOTHILL COLLEGE
MANAGER PLANT SERVICES
MANAGER ACCT SERV AND ANALYST
MANAGER DATA SERVICES
MANAGER MATERIAL SERVICES
DEAN OF INSTRUCTION
DEAN OF CONTINUING EDUCATION
DEAN OF STUDENTS
DEAN OF INSTRUCTION
DEAN OF CONTINUING EDUCATION
DEAN OF STUDENTS

CHARACTERISTICS OF FOOTHILL DISTRICT FACULTY

Information on instructional staff at De Anza and Foothill College is presented here so that readers may compare the faculty with those of other colleges. There is nothing in this descriptive data which explains the general receptivity of teaching staff to cooperative education. Something very real but difficult to quantify about commitment to students and education probably accounts for instructors' positive attitudes toward off-campus learning experiences.

The "typical" teacher is a middle-aged, middle-class white anglo male with a Master's degree teaching language arts, fine arts or business. He was hired around 1964, as extensive hiring occurred in the middle 1960's; very few new instructors have joined the colleges in the last five years. Due to lack of information about many faculty members, hire dates are not included in these tables.

Table 1 - Racial/Ethnic Characteristics of
District Faculty Fall, 1973

	American Indian	Asian	Black	Spanish Surname	Total Minority	Total White	Total in Survey
Full-time	0	6	8	5	19	20	339
Total	0	27	21	24	72	773	845

Table 2 - Demographic/Academic Characteristics of Full-time and Part-time Day Faculty

Discipline	Ages		Male	Female	PhD	MS/MA	BA/BS	AA	Other
ALLIED HEALTH	25-9	10	8	35	1	19	9	6	8
	30-9	11							
	40-9	10	[19%]	[81%]					
	50-9	9							
	60-9	0							
	N/A	3							
BUSINESS	25-9	1	25	12	2	26	8		1
	30-9	10							
	40-9	14	[68%]	[32%]					
	50-9	10							
	60-9	1							
	N/A	1							
BIOLOGICAL SCIENCES	25-9	0	17	3	3	16	1		
	30-9	9							
	40-9	8	[85%]	[15%]					
	50-9	3							
	60-9	0							
CHEMISTRY	25-9	1	15	2	5	11	1		
	30-9	8							
	40-9	4	[88%]	[12%]					
	50-9	4							
	60-9	0							
EDUCATION & SPECIAL ED	25-9	2		5		1	4		
	30-9	1							
	40-9	2		[100%]					
	50-9	0							
	60-9	0							

Discipline	Ages		Male	Female	PhD	MS/MA	BA/BS	AA	Other
ENGR/ELECT	25-9	0	18	0	1	11	4		2
	30-9	5							
	40-9	5	[100%]						
	50-9	8							
	60-9	0							
FINE ARTS	25-9	5	41	15	7	47	1		1
	30-9	19							
	40-9	22	[73%]	[27%]					
	50-9	8							
	60-9	2							
FOREIGN LANGUAGE	25-9	0	8	7	4	11			
	30-9	3							
	40-9	5	[53%]	[47%]					
	50-9	5							
	60-9	1							
	N/A	1							
LANGUAGE ARTS/SPCH	25-9	4	51	20	6	60	5		
	30-9	25							
	40-9	28	[72%]	[28%]					
	50-9	11							
	60-9	2							
	N/A	1							
MATH/PHYSICS & PHYS SCI'S	25-9	0	34	3	1	35	1		
	30-9	17							
	40-9	13	[92%]	[8%]					
	50-9	6							
	60-9	1							
PE/REC/HLTH	20-9	8	30	7	2	25	10		
	30-9	12							
	40-9	14	[81%]	[19%]					
	50-9	3							
	60-9	0							

Discipline	Ages	Male	Female	PhD	MS/MA	BA/BS	AA	Other
SOCIAL	20-9 4	52	15	14	44	9		
SCIENCES	30-9 25							
	40-9 23	[78%]	[22%]					
	50-9 9							
	60-9 3							
	N/A 3							
GUIDANCE &	25-9 3	19	14	2	31			
ORIENTATION	30-9 10							
	40-9 12	[58%]	[42%]					
	50-9 7							
	60-9 1							
OTHER MISC	25-9 2	5	11		9	5		2
PROGRAMS	30-9 5							
	40-9 2	[31%]	[69%]					
	50-9 5							
	60-9 2							
UNSPECIFIED	25-9 2	8		1	6	1		
	30-9 2							
	40-9 2	[100%]						
	50-9 2							
	60-9 0							
TOTAL	20-9 = 42	331	149	49	352	59	6	14
FACULTY	30-9 = 162							
	40-9 = 164	[69%]	[31%]	[10%]	[73%]	[12%]	[1%]	[3%]
	50-9 = 90							
	60-9 = 13							
	N/A = 9							
	480							

CHARACTERISTICS OF FOOTHILL DISTRICT STUDENTS

Student Data*

	Foothill		De Anza		District	
	Male	Female	Male	Female	Male	Female
Full-time	1704	1154	2057	1518	3761	2672
Part-time	3852	4227	4162	4693	8014	8920
	5556	5381	6219	6211	11,775	11,592

Total all students 23,367

* Spring, 1973-1974

Ethnic Data*

	Foothill		De Anza		District	
	Full-time	Total	Full-time	Total	Full-time	Total
Amer. Indian	24	75	55	240	79	315
Asian	116	363	166	424	282	787
Black	126	393	140	309	266	702
Other non-white	63	197	102	238	165	435
Spanish Surname	134	419	214	595	348	1014
TOTAL MINORITY	463	1447	677	1806	1140	3253

Total all students	24,495	
Non-respondents	2,026	(515 full-time)
Total other white	19,216	
Percent minorities among respondents	14.47%	

* Fall, 1973-1974

FOOTHILL COMMUNITY COLLEGE DISTRICT

CAREER & CERTIFICATE PROGRAMS

1974-75

Occupational Area	Academic Division	Curriculum	CAMPUS		Degree	Cert.	Coop.* Ed.
			DeAnza	Foothill			
AGRICULTURE	Biol/HS	Ornamental Horticulture					
		General		X	X		X
		Landscape Horticulture		X	X		X
		Nursery Management		X	X		X
APPLIED ART & SCIENCES	Fine Arts	Commercial Art		X	X	X	
	Fine Arts	Commercial Music		X	X		X
	Fine Arts	Photography	X		X		
BUSINESS	Business	Clerical Office Careers		X		X	X
	Business	Computer Operations	X			X	X
	Business	Data Processing					
		Business	X		X	X	X
		Science & Engineering	X		X	X	X
	Business	Fashion Merchandising		X		X	X
	Business	Purchasing	X		X	X	
	Business	Real Estate	X	X	X	X	X
	Business	Secretarial					
		Administration		X		X	X
		General	X	X	X	X	X
		Legal		X	X		X
		Medical	X		X		
		Technical		X	X		
	Business	Transportation	X		X	X	
ENGINEERING TECHNOLOGIES	Engr/Tech	Automotive Technology	X		X	X	X
	Engr/Tech	Bio-Medical Equipment Tech.		X	X		X
	Engr/Tech	Career Pilot					
		Commercial Pilot		X	X		
		Flight Instructor		X	X		
		Multi-Engine		X	X		
	Engr/Tech	Computer Aided Design/Dftg	X			X	
	Engr/Tech	Drafting, Design	X	X	X	X	X
	Engr/Tech	Electronics Technology					
		General		X		X	X
		Digital		X	X	X	X
		Microwave		X	X	X	X
		Television		X	X	X	
	Engr/Tech	Engineering & Technology	X		X		X
	Engr/Tech	Machine Tool Technology	X		X		X
	Engr/Tech	Maching Tool Programming	X			X	
	Engr/Tech	Manufacturing Technology		X	X	X	
	Engr/Tech	Materials Fabrication Tech.	X		X	X	X
	Engr/Tech	Quality Control	X		X	X	X
	Engr/Tech	Technical Illustration		X	X	X	X
HEALTH SCIENCES	Biol/HS	Anaplastologist/Ocularist		X	X		
	Biol/HS	Dental Assisting		X	X		
	Biol/HS	Dental Hygiene		X	X		
	Biol/HS	Medical Assisting					
		General	X		X		
		Pediatrics	X		X	X	

*Cooperative Education Field Experiences Available

Occupational Area	Academic Division	Curriculum	CAMPUS		Degree	Cert.	Coop.* Ed.
			DeAnza	Foothill			
HEALTH SCIENCES Cont.	Biol/HS	Nursing					
		Assisting	X			X	X
		Registered (RN)	X		X		
		Licensed Vocational (LVN)	X			X	
	Biol/HS	Physical Therapist Assistant	X		X		
	Biol/HS	Physician Assisting					
		Orthopaedic		SUSPENDED			
		Primary Care		X	X		
	Biol/HS	Radiologic Technology		X	X		
	Biol/HS	Respiratory Therapy		X	X		
	Biol/HS	Veterinary Technology					
		General		X	X	X	X
		Animal Health Care Spec.		X		X	
MANAGEMENT SUPERVISION	Business	Banking and Finance		X	X	X	
	Business	Health Care Facilities Mgmt.					
		Ext. Care Facilities Adm.		X	X	X	X
		Hospital Supervision		X	X	X	
	Business	Retail Management		X	X	X	
	Business	Small Business Management	X		X		
		Supervisory Management					
	Business	Business		X	X	X	
	Engr/Tech	Industrial		X	X	X	
	Business	Public Services Careers		X	X	X	
PUBLIC & SOCIAL SERVICES	Soc. Science	Administration of Justice					
		Corrections/Probations	X		X		
		Local Police Agency	X		X	X	
	Engr/Tech	Airline Careers					
		General		X	X		X
		Overseas		X	X		
	Soc. Science	Educational Aide					
		Elementary	X		X	X	X
		Secondary	X		X	X	X
	Library	Library Technical Assistant					
		Non-Print Media		X	X	X	X
		Library		X	X	X	X
	Biol/HS	Nursery School Training	X		X	X	X
	Phys. Ed. & Recreation	Recreation Leadership					
		General	X		X		X
		Activity Director in Nursing & Convalescent Facilities	X			X	X
		Therapeutic Recreation	X		X		
	Business	Travel Careers		X	X	X	X
TRADE & INDUSTRIAL	Engr/Tech	Automotive Mechanics	X			X	
		Automotive Clinics	X			X	
		Semi-Conductor Processing		X		X	X

*Cooperative Education Field Experiences Available

3.3 ACE Research Strategy and Activities

The Research Team has attempted to be conscious of the total research and development process while carrying out many specific, interrelated activities. Without losing sight of the project's overall objectives and time constraints, we have tried to be flexible and responsive to advice and incoming data. Readers planning or conducting feasibility studies may find our reasons for undertaking tasks in a specific sequence or in a particular manner useful.

This overview also provides context for the findings detailed in Part 1. The discussion focuses on meetings of the advisory Task Force because, in addition to their inherent significance, they are helpful keys to different stages of the project.

From the beginning, the researchers sought information about the potential for ACE at public, two-year, quarter-system institutions, using De Anza and Foothill Colleges as examples of such institutions, and about employers' willingness to create short-term alternate co-op learning stations. Project efforts focused internally, on the two campuses, have continuously interacted with those directed outwardly, toward employers in our region. For example, employer input has been transmitted to appropriate faculty; they, in turn, have provided us with information of interest to organizations and agencies which may hire ACE interns.

The first activity of the Research Team was the drafting of a "PERT" Chart which described the project strategy within an eight-month time frame (Page 62) To create this research calendar, it was essential to make explicit our knowledge of the two colleges and of the district organization and the socio economic environment, and to identify our expectations of the research project. Both the justifications for ACE as well as some problems which might develop during the feasibility study and possible future implementation were explored. We talked about questionnaires, research procedures and sampling, and about individuals, groups and committees that would affect the project.

The result of these discussions was a calendar that included the following sequential steps:

1. Initial background and comparative data-gathering
2. Meetings and appointments with business, industry, government and public school personnel
3. Mail survey of employers' attitudes and potential placements
4. Meetings with faculty on both campuses, in academic divisions
5. Meetings with college administrators, high school counselors and high school teacher groups

An assessment of student needs and interests was expected to be conducted concurrently with other data-gathering processes.

The actual research process as we have experienced it has been far more complex and multidimensional than the rather rational, orderly and aloof pattern implied in the calendar, but precisely because we at least had a plan for major research efforts, we had some guidelines to follow as the quantity and pace of activities increased.

After drafting the calendar, the Team undertook basic research and reading, prepared and mailed a questionnaire to two-year colleges reported to have alternate programs, and began to organize the advisory Task Force. While soliciting the appointment of various Task Force members a "white paper" was prepared for that group to provide some information about the potential and the problems which ACE could involve. Researching, discussing and writing this paper helped the project director and associate establish a collaborative working pattern which has been characteristic of all project activities.

As specified in the project proposal, the Task Force was designed to be a source of guidance and advice to the researchers, making us more widely accountable than we could be as staff members of the Office of Technical

Education. It simultaneously provided communication channels and representation for various groups whose knowledge and support for ACE would be vital during implementation activities. The appended list of the members and their affiliations illustrates the range of representation. Several members were asked to serve with the group by the Research Team (the administrative and staff personnel, a representative of a local high school district and a representative of the United States Civil Service Commission in San Francisco.) Faculty committees and groups were asked to select other representatives to the Task Force, with only the stipulation that the individuals involved should be interested in the project and have some familiarity with career education. Even though a few members of the Task Force represented two constituencies, the 18-member committee was rather large. Some Task Force members were known to be skeptical of the need for or possibility of establishing an alternate cooperative education program, but their selection for the group was encouraged specifically to avoid talking and sharing only with supporters of the project.

At the first Task Force meeting early in December, the Research Team reviewed the theory and an historical perspective of alternate cooperative education and asked the advisory group very directly to endorse the pursuit of an ACE feasibility study. Background materials, sample academic calendars and a proposed research strategy were then distributed and discussed at length. We felt sincerely that if any member or constituency represented on the Task Force had serious reservations about the value of the project, these reservations should be considered before the project was really underway. Although expressing concern about whether or not employers would provide sufficient numbers of high-quality stations and whether or not significant numbers of students really wanted internship experiences, the Task Force unanimously agreed that the ACE research should begin immediately.

During January and February the Team mailed a survey instrument to 565 local employers. When analysis of incoming results was underway, we began to concentrate explicitly on several non-traditional target groups of employers -- cities, school districts, research centers -- hoping to develop pilot placements, possibly for summer and definitely for fall. Frequent meetings were held with personnel directors, managers and key administrators of many organizations, both on our campuses and in offices and plants throughout the area. Usually there was consensus about the value of alternate co-op but concern about how to establish it concretely.

After three months of concentrated work developing and expanding employer relations, exploring pilot placements and initiating an extensive mail survey of students' experiences and attitudes, the researchers met again with the Task Force in April. During this meeting the group adopted the Recommendations detailed in Part 2. This action represented both endorsement of the philosophy and structure the Research Team was developing, and a commitment on the part of most of the individuals involved to support the Team's efforts to implement an alternate plan. Minutes of this meeting make it clear that after six months' exploration, most Task Force members were interested more in implementation plans and possibilities than in continued formal research.

The Task Force members' attitudes reflected general institutional commitment to ACE, which became stronger as the Research Team shared project results and activities with curriculum committees and administrative groups throughout the year. A key meeting was held with the regular Chancellor's Cabinet of Presidents and Deans in late April. At this meeting, the Project Director presented a position paper describing all the District's field experience programs (see Appendix 3.3h). The basic proposition that experimental, grant-funded projects such as ACE should be administered by the central Office of Technical Education, which includes the Office of Cooperative Education, while well-established programs (particularly parallel work experience) should be administered by instructional faculty and administrators on the De Anza and Foothill campuses, was endorsed by the Cabinet.

It is important to understand that behind the Cabinet's action is a problem every multi-college district faces -- that of maintaining some district-wide coordination, accountability and shared standards, while allowing each college flexibility and autonomy. Cooperative education programs epitomize this dilemma, for they are uniquely sensitive to local conditions such as the presence of a career program or proximity of a major employer at one college, yet by California state Education Code provisions, cooperative education programs must be district programs described in one coherent plan submitted to the state every year. Further, if transferable academic credit is awarded for co-op learning, then such experiences should be subject to the same standards, controls, and peer evaluations applied to other instructional offerings within a district, each college may vary in procedures and philosophy, making it difficult to maintain a district-wide program. [One alternative, organizing co-op under student services and treating academic credit as incidental, destroys its value as one way institutions can meet the varied needs and learning patterns of individual students, for it downgrades the instructional component and academic integrity of the program and overemphasizes the fetish-for-numbers growth and financial aid elements.]

In addition to the Chancellor's Cabinet action, other district-wide commitments which indicate the depth of institutional support for ACE are the large local financial commitment included in the 1974-1975 Title IV-D Grant application, and the full-time continued appointment of the project research associate. Both actions demonstrate intent to provide adequate staff and support for a strong implementation effort.

As Section 2 of this report details, on-going evaluation will be built into next year's program. Most assessment activities this past year have been ad hoc and informal, though the Research Team met frequently to consider the project's progress and plan future steps in detail, and periodically discussed various activities and findings with the Director of Technical Education and other advisors. This report is the first comprehensive attempt to evaluate our expectations and experiences in writing; preparing it has helped us think more explicitly about past events and plan future activities with care. In the coming months the Team expects to write more reports and papers, thus continuing the planning and self-appraisal process.

1 Nov 5-9 Planning & Organizing Start PERT Ch. Start Task Force Visit U.P.S. Rep.	2 Nov 12-16 PERT Completed Task Force Selected Read/Research Begin Define Problem	3 Nov 19-21 Define Problem Needs Assessment Campuses Students Business Industry Government	4 Nov 26-30 Delineation of Problem & Needs Assessment to Task Force Paper Presentation Sacto Conference	5 Dec 3-7 Task Force Meeting No. 1 Summary Report & Task Force Rec's Establish Inter. Meetings	6 Dec 10-14 Visit Jim Garmon Visit Bob Bennett Visit U.O.P. Visit Other Approp. Summary Report/Visits Write for Inter. Meetings
7 Dec 17-21 (1) Catch Up Review & Summary Progress Report (2) Design Summary Instrument (s) (3) Mail Random Survey	8 Jan 2-4 Four Days of Meetings with Selected Bus-Ind-Govt Common Interests use (s)	9 Jan 7-11 Bus/Ind/Govt Appointment P.S. = 3 per day @ 3 S.D. = 3 per day @ 2 Ind. Rough Summary by use (s)	10 Jan 14-18 Meetings days week = 9 days week = 6 15 us after each use (s)	11 Jan 21-26 Write up Final Findings to date, weeks 8-9-10 Task Force Meeting	12 Jan 28 - Feb 1 Random Surveys - as many as possible in person. Summarize Findings of Mail Survey
13 Feb 4-8 Visit Divisions Engr/Tech Bus. P/S/M	14 Feb 11-15 Visit Divisions Bio/HS Soc. Sci. Fine Arts	15 Feb 19-22 Visit Divisions Language Arts P.E. - Rec.	16 Feb 25-Mar 1 Summarize weeks 13-14-15 - meetings Task Force Meeting	17 Mar 4-8 Meet President's Cabinet Meet Superintendent's Cabinet to summarize meetings	18 Mar 11-15 Visit High Schools - Counselors Meetings - Interested Faculty
19 Mar 18-22 Visit High Schools Write Up	20 Mar 25-29 Catch Up - Begin Research Closure	21 Apr 1-5 DEVELOP REPORT OF FINDINGS & RECOMMENDATIONS	22 Apr 8-12	23 Apr 15-19	24 Apr 22-26 Draft Report to Task Force
25 Apr 29 - May 3 Clean Up & Polish Final Report	26 May 6-10 Final Report to Tech. Ed. Council To Curriculum Committees	27 May 13-14 Final Report to Cabinet	28 May 20-24 Final Report to Task Force	29 May 27-31 Final Report to Board	30 June 3-28 Write & Publish Final Research Project & File With HEW

PROPOSED SCHEDULE OF RESEARCH ACTIVITIES

3.3b

FOOTHILL COMMUNITY COLLEGE DISTRICT

ALTERNATE COOPERATIVE EDUCATION TASK FORCE, 1973 - 1974

Dr. Nathan Boortz	Director Technical Education (District Administration)
Ken Casteel	Director of Occupational and Career Education, Mountain View-Los Altos High School District
Douglas Ellwood	Student, Foothill (Associated Students)
Raul Felix	Chairman Multicultural Office, Foothill
Robert Fischer	Student, De Anza (Associated Students)
Dr. James Fitzgerald	President Foothill College (Campus Administration)
Carl Grame	Chairman Business Data Processing (De Anza Curriculum Committee; Technical Education Council)
Dorothy Hanson	Human Resource Development Officer, Foothill
Ed Kawazoe	Coordinator Multicultural Programs, De Anza
Don Leach	Curriculum Committee, Foothill
Maxine Mitchell	Human Resource Development Officer, De Anza
Dolly Prchal	Associate Dean Library, Foothill (Technical Education Council)
Don Robbins	U. S. Civil Service Commission, San Francisco
Murray Shipnuck	Foothill Counselor
Ruth Wallace	De Anza Faculty (WEXED)
Marguerite Will	Continuing Education (WEXED, Foothill)
Reinea Goldseger	De Anza Counselor
Peggy Shoenhair & S. H. Davidson	Project Researchers

FOOTHILL COMMUNITY COLLEGE DISTRICT
OFFICE OF TECHNICAL EDUCATION
Research Team for Alternate Cooperative Education

Discussion Paper

Introduction

The Foothill Community College District has received funding from HEW to conduct a feasibility study of Alternate Cooperative Education (ACE) for two-year community colleges operating on quarter-system calendars. By June 30, 1974, the following major tasks are to be completed:

1. Surveys of attitudes and expectations of students, educators, employers, and the "community" concerning Alternate Cooperative Education;
2. Examination of existing college programs and genuine or proposed schemes which incorporate alternating periods of full-time employment with full-time study;
3. Exploration of curricular and institutional conditions and changes which might encourage and accommodate alternate programs.

The Task Force on Alternate Cooperative Education

As specified in the funding prospectus, to accomplish their responsibilities and receive maximum advice and communication from all groups which might be affected by an Alternate Cooperative Education Program, the project researchers are to organize an advisory Task Force. This group will be composed of representatives of the California Department of Human Resources Development, the District Office of Technical Education, and of the administration, faculty, counseling staff, Multicultural Relations Office and students of De Anza College and of Foothill College. Additionally, the Chancellor for the California Community Colleges is invited to recommend a consultant from his staff with especial expertise in cooperative education, articulation, and inter-segment relations. The Task Force will be augmented when appropriate by representatives of a variety of local business, industry, and government agencies.

The major responsibility of the Task Force is to provide overall direction for the feasibility study; the researchers will report to the group the design, conduct and written description of the study. Members of the Task Force will be asked to represent their areas of expertise and interest as fully as possible, sharing their concerns, feelings, ideas, and recommendations about Alternate Cooperative Education with the group.

Alternate Cooperative Education: The Ideal

Alternate Cooperative Education is ideally a smoothly-functioning program through which many needs of students, educators, and employers are met. Students alternate periods of full-time study with periods of full-time (usually paid) employment. Integration of the experiential component with academic programs is achieved through counseling; seminars and cooperative classes; instructor's visits to student work stations; employers' sensitivity to student-employees; employers' participation on advisory committees and consultations with college personnel; and supportive administrative services.

Teamed or paired students may share full-time positions, one working while the other is in school. Another way to minimize inconveniences to employers is to schedule student employment periods during times when employers need temporary, full-time help. In most programs, students return to the same employer for all their work periods; yet, they should be gaining experience in a variety of positions within a company or agency. Less frequently, students work for a different employer each work period. Formal agreements are reached between the college, the student, and the employer regarding their respective responsibilities to the Cooperative Program. For example, an employer concerned about turnover can require a prospective employee to promise to serve every work period with his company. Similarly, employers may promise to maintain work stations if at all possible, and the college staff commits itself to provide coordination, support, and evaluation for the student. In most programs, the student, his supervisor, and a faculty coordinator from the college agree upon specific, measurable learning objectives for each period of student employment, and the three evaluate the student's accomplishment of these objectives at the conclusion of the work period.

Ideally, every participant completes his responsibilities, and the results are most positive. Students receive relevant, practical, personally-tailored, financially-rewarding educational preparation; employers help develop enthusiastic, well-educated employees for their companies and industries; instructors and administrators develop and participate in programs which expand the campus-based learning community throughout the local area.

Alternate Cooperative Education: Some Realities

A small but growing body of literature about the experiences of many different institutions, beginning with the University of Cincinnati in 1906 and Antioch in 1921, as well as consultation with a number of cooperative personnel from around the country, reveals some of the problems of implementing the cooperative education ideal. Whatever the institution, local economy or characteristics of the student population, a high-quality, academically-responsible cooperative education program requires the understanding and support of many different individuals and groups, on and off the campus.

Administrative support is critical. Barry Heermann of Sinclair Community College in Ohio, the site of one of the few genuine alternate models in a two-year college, says flatly that "Cooperative education can and does work if administrative commitment is up to the task." (1973:16) If understanding and support is weak, ineffectual or non-existent at any level of the college, cooperative education programs will have problems.

Faculty commitment is equally critical. If an institution is to have a cooperative experiential program, instructors need personal experience, too: planning programs, coordinating students, teaching seminars and related courses, and developing educational work stations. Heermann again: "A truly viable integration of work and study requires a changed perspective for faculty members, and a new conception of faculty identity." (1973:98) Faculty members who believe in the educational value of off-campus learning will develop skills and attitudes required to become "educational integrators," while more traditional instructors will have difficulty with this multi-faceted role.

Some colleges, or some of their programs, departments or divisions, may be so inflexibly structured that cooperating students cannot be accommodated. As J. Dudley Dawson has often pointed out, academic curricula and schedules must allow students to move in and out of study periods with minimal disruption. (Knowles, 1971:46) Lock-step sequential courses and infrequent scheduling of required courses are incompatible with cooperative education.

Dr. Dawson also reminds us that approximately 70 percent of all community college students hold part-time or full-time jobs while attending school. (Knowles, 1971:42) Many of these students might like the integrated learning alternate cooperative education offers. Nationally, well-organized alternate cooperative programs have had success attracting students, but many potential participants have no knowledge of this educational possibility. Students' expectations and needs require careful consideration.

Employers' expectations and needs demand equal consideration, for instructive, challenging work stations are the heart of cooperative education programs. Extensive effort must go into developing and maintaining support and understanding among employers and other community members. The economic and social conditions which affect employers, as well as the annual and long-term cyclic employment patterns of some industries, must be understood by the educational personnel involved in cooperative education.

Coordination of the activities of college staff, employers, and students is another element of cooperative education. Communication difficulties and misunderstandings about respective responsibilities can adversely affect student learning, employer commitment, academic integrity, and the general conduct of the program.

Overall economic conditions may have great impact on cooperative education programs. A recession, with wide-spread unemployment, will reduce the number of paid work stations available. However, some employers may move cooperative students into short-term positions; the college can help employers staff flexibly when economic conditions are unstable. Furthermore, students whose educational preparation includes volunteer or paid work experience are quite competitive when jobs are scarce.

Organized labor is another element in the cooperative education picture. Some unions and associations support cooperative education quite vigorously, aware of the possibilities of improving the educational level of their members and supplementing their own apprentice and on-the-job training programs. However, other unions may not be able to accomodate short-term or part-time employees, or contract restrictions may limit the educational possibilities for cooperative students. Local situations may be considered during bargaining and negotiation sessions.

Conclusion

The preceeding comments indicate the potential and the problems alternate cooperative education involves. The Task Force is to address its time and attention to exploring the practicality and rationale of this type of educational venture, and to aid in exposing all the strengths and weaknesses of this learning design. The researchers--and surely the U. S. Department of Health, Education and Welfare--seek each member's complete and honest input as a thorough study is conducted, so that educational decision making about alternate cooperative education, whatever the details involved, will be honest and fair to students and to the social/ economic communities we all represent.

Some Areas to Explore

The following outline is presented to indicate some of the specific areas the Task Force and the project researchers should consider. It is not comprehensive or final in any sense.

- I. Institutional
  - A. Calendars and curricula
    - 1. Full-year operation
    - 2. Sequences
    - 3. Summer school
  - B. Staffing
    - 1. Faculty
    - 2. Counselors
    - 3. Administration and services (including placement)
      - a. Internal communications
      - b. In-service training
      - c. Multi-cultural/Women

- II. Employers
  - A. Availability of quality work stations
  - B. Developing understanding and support
    - 1. Commitment to educational value
    - 2. Sensitivity to students' needs
    - 3. Participation in evaluation of students and program
    - 4. Awareness of college's responsibilities

- III. Articulation with Four-Year Colleges and Institutions
  - A. Knowledge about programs, problems - two-way communication
  - B. Agreements facilitating transfer, acceptance of credits

- IV. Articulation with Secondary Schools
  - A. Provide support and continuity for co-op programs in secondary schools
  - B. Identify specific students interested in entering co-op programs
  - C. Maintain communication and feedback with administration, counselors, faculty, students (Career Days, etc.)

- V. Unions and Associations
  - A. Positive and restrictive patterns
  - B. Opportunities to facilitate accomplishment of unions' objectives

BIBLIOGRAPHY

Books

Heermann, Barry. Cooperative Education in Community Colleges. San Francisco: Jossey-Bass Inc., Publishers, 1973. 219 pps. Bibliography, sample forms.

Up-to-date, comprehensive survey and discussion of various administrative patterns; calendars; model programs; student, faculty, employers attitudes, responsibilities; value of experiential learning, etc. Sample forms, sample community survey, 10-page bibliography.

Knowles, Asa S. and Associates. Handbook of Cooperative Education. San Francisco: Jossey-Bass, Inc., Publishers, 1971. 386 pps., Bibliography.

The standard major reference work. Sections on History and Philosophy, Description of Programs, Conduct of Programs, Administration, Relevancy to Special Groups, Development of New Programs, and Appendices. Each section is composed of major survey papers by prominent cooperative educators.

Reports

Bennett, Robert and Redding, Vaughn. Community College Vocational Cooperative Education, Final Report. Exemplary Project in Vocational Education, A Consortium of Five Community Colleges (San Mateo Community College District, Coast Community College District), 1973.

FOOTHILL COMMUNITY COLLEGE DISTRICT
OFFICE OF TECHNICAL EDUCATION
Research Team for Alternate Cooperative Education

MEMO TO: All Faculty

FROM: Sid Davidson and Peggy Shoenhair, Alternate Cooperative Education Research Team, Office of Technical Education

SUBJECT: Alternate Cooperative Education Research Project

HEW has awarded the Foothill District funds for conducting a feasibility study of Alternate Cooperative Education ("Antioch plan") for quarter-system colleges. A learning program in which students rotate periods of full-time study with periods of full-time, responsible, paid employment could enrich many students' education. Learning stations at local agencies and industrymay provide opportunities we could never offer on campus; students could integrate theoretical knowledge with practical, current experience. Students could earn academic credit for their employment, which should be available to liberal arts and social science majors as well as students in technical and vocational fields.

In Cooperative Education programs, instructor-coordinators from the college faculty assist students in interrelating their on- and off-campus learning. They consult often with students and supervisors. They visit students' work stations. Working together, the student, employer, and faculty-coordinator establish measurable learning objectives for the student's employment period; at the end of the term, the instructor evaluates the student's accomplishment of these goals.

Although the majority of our students presently work, many find their work and study conflict, while others are penalized by inflexible programs which do not accommodate working students. Many of the 75 percent of students who start college and withdraw do so because of conflicting demands. Curricula designed around Alternate Cooperative Education could improve student retention, increase faculty opportunities for coordination and community contacts, provide students with individually-tailored learning packages, increase the gross numbers of students attending college, and more generally expand the range of learning experiences available to the college community.

A critical part of the Alternate Cooperative Education research project involves faculty ideas and attitudes. We need to know what you think about providing integrated field experiences for your students. Could any of your programs be enhanced with challenging, responsible field work or internships? As faculty, do you see any opportunities for Alternate Cooperative Education? Would you like to work individually with students moving back and forth between school and work?

If you have any ideas or comments about Alternate Cooperative Education, we hope you will share them with us. We will visit many division meetings. We will also meet with any individuals or groups to answer questions, at their convenience. Please call or send a note to Ms. Shoenhair and/or Sid Davidson at the Office of Technical Education, ext. 519. We need your help if we are to truly explore the exciting possibilities of Cooperative Education.

3.3e

FOOTHILL COMMUNITY COLLEGE DISTRICT

DE ANZA & FOOTHILL COLLEGES

12345 El Monte Road
Los Altos Hills
California 94022
(415) 948-3523

January 2, 1974

Through the encouragement of the U. S. Department of Health, Education and Welfare, the Foothill College District is conducting a feasibility study of Alternate Cooperative Education for quarter-system community colleges. The specifications for this federally endorsed project require careful examination of employers' needs and support for programs in which students alternate periods of full-time classroom study with periods of full-time employment in responsible, educationally-expanding paid positions. Cooperative education extends the campus into the community: Students benefit from individualized instructional programs combining traditional on-campus experiences with learning situations made possible through the cooperation of participating employers.

Because we solicit your thoughtful, candid consideration of some central questions which are critically important, your prompt response to the attached brief survey is essential and will be most appreciated. Please understand this request in no way represents either your commitment of employment stations or the availability of student employees, but is a solicitation of your advice and counsel.

Two project researchers stand ready to answer any questions you may have, and you are free to contact Ms. Shoenhair or Mr. Davidson at (415) 948-3523, Extension 519.

Thank you for your time and assistance in our behalf.

Sincerely,

John W. Dunn

John W. Dunn
Chancellor

FOOTHILL COMMUNITY COLLEGE DISTRICT

Office of Technical Education

Research Project for Alternate Cooperative Education

INTRODUCTORY STATEMENT

Cooperative education is a strategy of interdependent combinations of educational instruction and employment which responds to society's need for mature, responsible adults with more than academic classroom experience. In varied learning stations offered by businesses, industrial firms, government offices and social service agencies, students receive practical, meaningful training which expands and supplements the formal theoretical learning provided by the colleges. Employers of cooperative education participants help develop career-oriented students with the skills and attitudes their companies and agencies require.

Cooperative education students are commited to becoming articulate and competitive in their chosen fields. They are bright, dedicated, highly-motivated learners. They receive academic credit for the learning which takes place through employment designed as an integral part of their educational program. Students are screened, counseled, supported and evaluated by college faculty working closely with employers and supervisors. The history of cooperative education in colleges and universities reveals that after they receive their degrees, many cooperative education students are hired and continue as outstanding personnel with their original employers.

The educational scheme also allows management to select employees from their company whom they wish to send back to the college classroom for educational refreshment and exposure to new conceptual theory and technology. The college campuses then become an expanded source of inexpensive and convenient in-service training for the firm with all the attendant college services thus available.

Alternate cooperative education better meets the needs of some students and employers through full-time employment; for while simultaneous work-and-study often involve competing demands on both employees and employers, alternate students can devote themselves totally to learning on the job during their work terms, acquiring skills and understandings unavailable to part-time workers. Alternate students are frequently "paired" so as to switch roles every quarter--working one quarter, studying the next, then returning to work--taking no lengthy vacations throughout their two-years-plus-summers tenure in a cooperative program: Some students may alternate work and school periods of two quarters (six months) if this provides greater flexibility.

FOOTHILL COMMUNITY COLLEGE DISTRICT
Office of Technical Education
Research Project for Alternate Cooperative Education

ACE Employer Survey - January, 1974

1. Name of company or agency ____

2. Address ____
Street City Zipcode

3. Phone ____________________

4. Type of business, industry or agency ______________________________

5. Name of respondent ______________________________

Title ______________________________ Phone ____________________

6. Approximate number of employees as of January, 1974:

Full-time ________ Part-time ________ Male ________ Female ________

7. Please estimate the percentage of your employees whose ages are:

Under 20 _____ 21-30 _____ 31-40 _____ 41-50 _____ 51-65 _____ Over 65 _____

8. Please estimate percentage of employees continuously employed by your organization:

Under 1 year ______ 1-3 years ______ 4-9 years ______ Over 10 years ______

9. Please estimate the percentage of your employees who have:

Less than a high-school education _____
A high-school diploma or equivalent _____
Up to one year's college/technical school training _____
AA or AS degrees (or equivalent--2 years college) _____
BA or BS degrees _____
Advanced degrees _____

10. Please check the response below which most nearly describes your organization's overall policy concerning in-service training and education.

_______ a. Formal in-service training is provided for all employees.

_______ b. Formal in-service training is available to employees only in the following categories (please specify): ______________________________
____

_______ c. Our in-service training is informal; employees are encouraged to take advantage of opportunities for formal education.

_______ d. Neither in-service training nor continuing education is required.

_______ e. We seek in-service and/or educational programs for employees in the following categories: ______________________________
____

f. Other (or comments)

Continue on Reverse

Please indicate the distribution of your work force in the following occupational categories, estimating the percentage of each total who are primarily students.

	Total employees	% Who are students
Accounting/fiscal	____	____
Communications	____	____
Craftsmen	____	____
Education or health aides/techs/clinicians	____	____
Managers/administrators	____	____
Management trainees	____	____
Office and secretarial	____	____
Production control	____	____
Production workers	____	____
Professional [MD, PhD, JD, etc.]	____	____
Public Safety	____	____
Other public services	____	____
Sales or advertising	____	____
Technicians	____	____
Other (please specify)		
____	____	____
____	____	____

What positions in your organization could accommodate alternate cooperative education students (as described) if they were available for employment in learning stations? Please list job titles and indicate the appropriateness of quarterly rotation.

	Employed students could rotate every three months	Comments
Accounting/fiscal		
1. ____	Yes ____ No ____	
2. ____	Yes ____ No ____	
Communications		
1. ____	Yes ____ No ____	
2. ____	Yes ____ No ____	
Craftsmen		
1. ____	Yes ____ No ____	
2. ____	Yes ____ No ____	
Education/health aides		
1. ____	Yes ____ No ____	
2. ____	Yes ____ No ____	
Managers/administrators		
1. ____	Yes ____ No ____	
2. ____	Yes ____ No ____	
Management trainees		
1. ____	Yes ____ No ____	
2. ____	Yes ____ No ____	
Office/secretarial		
1. ____	Yes ____ No ____	
2. ____	Yes ____ No ____	
Production control		
1. ____	Yes ____ No ____	
2. ____	Yes ____ No ____	
Production workers		
1. ____	Yes ____ No ____	
2. ____	Yes ____ No ____	
Professional		
1. ____	Yes ____ No ____	
2. ____	Yes ____ No ____	
Public safety		
1. ____	Yes ____ No ____	
2. ____	Yes ____ No ____	
Other public service		
1. ____	Yes ____ No ____	
2. ____	Yes ____ No ____	
Sales/advertising		
1. ____	Yes ____ No ____	
2. ____	Yes ____ No ____	
Technicians		
1. ____	Yes ____ No ____	
2. ____	Yes ____ No ____	
Other (please specify)		
1. ____	Yes ____ No ____	
2. ____	Yes ____ No ____	

3.3f

FOOTHILL COMMUNITY COLLEGE DISTRICT
OFFICE OF TECHNICAL EDUCATION
RESEARCH TEAM ON ALTERNATE COOPERATIVE EDUCATION

Note: District totals, Foothill faculty, and De Anza faculty responses are presented in that order.

Dear Colleagues

We have been actively assessing the interests of students, faculty, and employers in field experience educational opportunities. It is essential at this time that we obtain additional accurate data on faculty attitudes and participation in cooperative work-learning experiences.

Various programs which integrate off-campus learning with traditional classroom offerings have been continuously offered by De Anza and Foothill, and other possibilities are being explored. Your cooperation in responding to the following brief questionnaire will help us establish a more complete picture of faculty involvement and interest in experiential learning programs for yourselves and your students. In answering, please consider all types of educational field work experiences whether they have been called work experience, internships, field experiences, practicum, clinical experiences or anything else. Please return this form to the Office of Technical Education [or ask your division secretary to return it] as soon as possible.

Please check the responses which most clearly match your thinking, and add any comments or suggestions in the space below.

1. My awareness of campus or district-wide types of field experience learning is:

   21/13/8 Extensive　　90/49/41 Moderate　　43/23/20 Minimal, Non-existent

2. My interest in having field experiences as educational options for students is:

   94/51/43 High　　54/33/21 Moderate　　4/2/2 Minimal, Non-existent

3. In my opinion, the kinds of students with whom I work

   71/38/33 Need　　68/39/29 May need　　13/8/5 Do not need off-campus learning experiences as part of their educational programs.

4. As far as I know, students in my classes/programs

   38/14/24 Always or frequently　　94/58/36 Occasionally　　19/12/7 Never are involved in field experience learning.

5. If some type of field experience is/were available to your students, which response most clearly reflects your situation?

59/29/30 I am already involved (field coordinator, counseling, clinical placement, etc.)

50/32/18 I would like to be involved in the following way(s)

24/17/7 I would rather not be involved because

Comments:

Name:　　Extension:

Division:　　Campus:

Dear Foothill/De Anza student:

The Department of Health, Education and Welfare is supporting Foothill Community College District's research on student, faculty and employer interest in providing education field experience. Students undertaking field experience could receive academic credit and practical training by combining responsible, full-time employment with college programs. Rather than working and studying simultaneously, as many community college students now do, programs might be developed which would allow students to alternate quarters of full-time study with quarters of full-time work.

Accurate information about students' experiences and interests is essential to this research. We hope you will take time right now to respond honestly to the following questions, and return this form in the attached envelope. Information from you may help the colleges better meet your needs and those of others in the De Anza College and Foothill College communities.

1. Many college students "stop out" of school for a period of time during their college years and later return to classes. If you have stayed out of college for one or more terms (excluding summers), will you indicate all of the following reasons that most nearly match your reasons for your action. If you have never "stopped out" of college, please check (a) below and proceed to Question 18.

   a. 346 I have never taken time off from my college education, except for summers. (Proceed to Question 18.)

   b. 470 I stopped out of college for ______________ / ______________ because:
   (Check as many as apply) (Length of time) (Number of times)

   2. 59 I wanted to travel.
   3. 199 I had to make money.
   4. 121 I was tired of going to school and needed a break.
   5. 85 I was bored and "turned off" by my school work.
   6. 165 I needed time to deal with personal/family matters.
   7. 93 I went into the military service.
   8. 59 I was getting poor grades.
   9. 141 I was overworked going to school and working at the same time.
   10. 4 I didn't like De Anza College.
   11. 5 I didn't like Foothill College.
   12. 12 I lost my job and/or I lost my financial aid.
   13. 54 I felt that my course work had very little to do with the rest of my life.
   14. 41 I couldn't see how my school work was going to help me get the kind of employment I wanted.
   15. 56 I had a full-time job offer I couldn't pass up.
   16. 44 I moved from the college district.
   17. 152 Other (please explain)______________________________

18.-20. Do you believe that the college should award academic credit for learning which occurs through a field experience with an agency or employer off-campus? (Please check either yes or no to each item.)

	Yes	No	No answer		Yes	No	No
18. Full-time?	693	100	51	20. Paid?	730	70	42
19. Part-time?	714	75	55	21. Volunteer?	678	81	85

22. To what extent are you now working? No answer 35

   a. 426 Full-time (35-40 hrs/week or more)
   b. 714 Part-time (less than 35 hrs/week)
   c. 16 Work as a volunteer
   d. 162 Not working in the traditional sense

23. Would you be interested in full-time, paid employment for one or more quarters during your college education, in a challenging position closely related to your college major or program?

   a. 584 Yes b. 117 No c. 121 Maybe No answer 21

(Continue on Reverse)

24.- If you answered "yes" to Question 23, which of the following match your reasons for
30. your response. (Please check as many as apply.)

24.280 It's hard to get a job in my field without experience.
25.483 I think I could learn things on a job that I can't learn in school.
26.358 I need to make money during my college years.
27.132 Experience now will help me transfer to a four-year college.
28.419 Experience now will help me get a better job when I complete my certificate, degree or program.
29.426 Experience now will help me decide if I want to continue in the career I am considering or have chosen.
30. 84 Other(s) (Please explain)____________________

31. Sex: a.390 Female b.444 Male

32. Age: a.368 Under 25 b.465 Over 25

33. a.378 Married b.447 Single

34. Veteran: a.287 Yes b.482 No

35.& (Optional) Please check one of the following categories:
36.

a. 5 Native American, Indian
b.20 Afro-American, Black, Negro
c.32 Asian-American
d.36 Chicano, Mexican-American, Spanish-American
e.682 White/Anglo

36.70 Other (Please specify)____________________

37. Do you qualify for financial aid?

a.124 Yes
b.369 No
c.105 I don't know but I think I do
d.228 I don't know but I doubt it

38. Student status: Check one: [Full-time is 12 units or more]

a.264 Full-time day student
b. 92 Part-time day student
c.102 Full-time evening student
d.272 Part-time evening student
e. 71 Day and evening student

39.- Which of the following broad categories includes your major or career program?
41.

39. a.117 Biological and Health Sciences
b.152 Business
c. 17 Communications/Language Arts
d.109 Engineering/Technology
e. 32 Fine and Applied Arts

40. a. 36 Liberal Arts
b. 11 Ornamental Horticulture/Landscaping/Forestry
c. 9 Physical Education/Recreation
d. 16 Physical Sciences/Mathematics
e. 11 Real Estate

41. a. 30 Social Sciences (Including Ethnic Studies)
b. 34 Social Services (Including Education & Public Safety)
c. 13 Supervision/Management (Public & Private)
d. 11 Transportation
e.224 I have no major career program at this time.

THE "UMBRELLA" OF FIELD EXPERIENCE PROGRAMS - De Anza and Foothill Colleges

Work Experience*	NASA-Ames*	Internships*	Allied Health*	Other Programs*	A-C-E*	OTHER[z]
> DeAnza=150 Ers.	> Technicians	Real Estate	Contracts for clinical placement	Nurse. Asst.	Field Rsch & site visits	Volunteers (McElroy)
> Foothill=165 Ers.	> Machinists	Merchandising		Head Start		
> 27 Coordinators	> Fabricators	Public Admin.		Math observers	Participants Ers and Ees	Law Enforc't
	> Electronics	SJ Airport				Educ. Paraprof.
	> Modeling	SFO Intern'l				Recreation Aides

* The Office of Technical Education has a major responsibility in facilitating the Work Experience Education Program; is the prime contractor for the five NASA trainee programs; Conducts the field evaluation and supervision of the Real Estate Internship program including first-day enrollment; assists or conducts evaluations for the Merchandising and Public Administration Interns; assists in design and implementation of Airport Travel Aide projects; is seeking affiliation with the J.F. Kennedy Summer Intern Program; monitors clinical and facilities contracts for Allied Health; conducts orientation and enrolls participants into Nurse Assistant and Head Start Aide programs; is the project manager for an H.E.W. project on the feasibility of Alternate Cooperative Education Programs for quarter-system two-year colleges and has established several significant participants for pilot programs which can be initiated in the fields of Accounting/business, Design drafting, Education Aide, Electronics, Library and media, and Psychology and mental health.

[z] This is a listing of other programs available for students but with which the OTE has no involvement aside from Advisory Committee Participation.

FOOTHILL COLLEGE

1. Curriculum Description

61	SUPERVISED A.C.E. FIELD EXPERIENCE/INTERNSHIP	4 Units
61x		6 Units
61y		8 Units

Prerequisites: Approval of the Work Experience Education Director, admission to the Alternate Cooperative Education program and a college-recognized career program objective. Must have 2.0 grade-point average and have successfully completed twelve units of college work. May be taken for maximum of 16 units of credit. Graded credit-no credit.

Twenty, thirty or forty hours per week of gainful employment. Seminar attendance, written precis and bi-weekly contact with faculty coordinator required.

Supervised career preparation through Alternate Cooperative Education (ACE) field experience, internship or preceptorship in public or social service, medical facility, business or industry site in the occupation for which the student's academic program is designed. Most frequently students will alternate full-time experience (36-40 hours per week) with full-time school for four terms: some less-than-full-time options may be arranged.

2. Expected Outcomes

The purpose of the course is to provide expanded learning opportunities through a field-based experience and to help students maximize affective and cognative development from their selected experiences. Students will be involved in forty (sometimes fewer) hours weekly of participation in an internship or preceptorship in a public service, social service, medical, business or industry environment; they will be supervised by a professional job advisor on the site and guided by a Foothill faculty coordinator who has approved their learning objectives contract, met with the on-site job advisor to authenticate the objectives, and who visits and evaluates the job site and student periodically during the term.

3. Expanded Course Description

1. The exploration and discovery of career roles. Discovery of the qualities of work of specific jobs, of one's interest and endorsements, and the emergence of one's career development.
2. Discovering and resolving the similarities of any differences between principles and ideas learned in the classroom and library and those discovered and experienced in the world of application.
3. Choosing and acting informedly about the crucial relationships, events and acts that affect one's life and the lives of others and of society/community; learning how to act in and with one's environment.
4. Exploration and evaluation of professional journals, news releases, organizational communications and other information sources describing and elaborating upon career opportunities in the selected field.
5. Applying skills, theories and concepts learned in the classroom to actual performance.

4. Method of Evaluating Outcomes

On-the-job performance objectives evaluation; written assignments; participation in seminars.

Adopted by the Board of Trustees June 20, 1974

DE ANZA COLLEGE
ENGINEERING/TECHNOLOGY DIVISION
COURSE OUTLINE

ENGINEERING 98 Spring 1974

I Catalog Description:

Engineering 98 Coop Engineering-Technology Field Experience 8 units

Prerequisites: Second year standing, acceptance into an engineering/technology division coop program and consent of Division Chairman.

Full time employment in a cooperating organization. May be taken twice for credit in different job sites.

Extension of technical skills gained through employment in an industrial setting with a company which is committed to participate in this Coop Program with De Anza College.

II Required Background:

Completion of required first year courses.

III Expected Outcome:

Students will gain a variety of experiences while performing in an industrial atmosphere. This opportunity will permit students to coordinate academic skills by industrial application.

IV Expanded Description of Course:

Students that have completed the first year program in Engineering/Technology Division; upon application, may be selected for referral to industrial departments for possible full time employment for one quarter. Industries to be considered must agree to provide a variety of experiences. Samples of work must be made available to faculty of De Anza College for evaluation.

V Method of Evaluation of Outcome:

Copies of a minimum of three different types of projects will be submitted to the faculty and will be reviewed by De Anza College Staff during the last weeks of the quarter. Work will include drawings, reports, written specifications and calculations where applicable. Grade assigned will be credit or no credit.

DESIGN DRAFTING - COOP PROGRAM - A.A. DEGREE

The following courses must be completed prior to applying for a coop assignment.

[1]Engineering	51A, 51B	Technical Drawing	8
	53	Design Drafting	5
	70A, 70B, 70C	Machine Tools	15
	71	Mechnics of Materials	4
	72	Mechanics of Mat'l Lab	1
Mathematics	101	Beginning Algebra	5
	60A	Technical Mathematics	4
Physics	10	Concepts of Physics	5

If a student elects to participate in the coop program, he may apply for placement in coop employment at this time. The following must also be completed prior to receipt of an A.A. Degree

Engineering 52	Descriptive Geometry	5
Engineering 73A, 73B	Materials and Processes	9
Engineering 98 (Twice)	Coop Field Experience	8 8
Electronics 61	Electricity	5

GENERAL EDUCATION REQUIREMENTS

[2]American History and Institutions	4
English 1A or 3	4
Ethnic Studies	4
Fine Arts	4
[3]Speech 1A or 15 or 16	4
Social Science Literature/Philosophy	8

OTHER REQUIREMENTS[2]

Guidance	1
Health 21	3
Physical Education	4

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[1] Passing Drafting Quality examination for advanced placement in Engineering 51B will allow a free elective.

[2] See catalog for graduation requirement.

[3] May be met before English 1A requirement.

PROPOSED DESIGN DRAFTING COOP PROGRAM

Year 1		Year 2 Group A		Group B	
FALL		**FALL**			
Guidance	1	*Engr. 98 Coop Field Exp.	8	Engr. 52	5
Engr. 51A Tech. Dwg.	4			Elect. 61A	5
Engr. 70A Mach. Tools	5			Engr. 73A	5
Math 101	5			PE	1
English 1A or 3	4				16
	19				
WINTER		**WINTER**			
Engr. 51B	4	Engr. 52	5	Engr. 98 Coop Field	8
Engr. 70B	5	Engr. 73A	5		
Physics 10	5	Electr. 61A	5		
Math 60A	4	PE	1		
	18		16		
SPRING		**SPRING**			
				Fine Arts Elect.	4
Engr. 53	5	*Engr. 98 Coop Field Exp.	8	Engr. 73B	4
Engr. 70C	5			Soc Sci/etc. elect.	4
Engr. 71	4			American History	4
Engr. 72	1			PE	1
Health 21	3				17
	18				
SUMMER OR NIGHTS		**SUMMER**			
Speech	4	Engr. 73B	4	Engr. 98 Coop Field Exp.	8
PE	2	Soc Sci Etc.	4		
Ethnic	4	American Hist.	4		
Soc. Sci.	4	PE	1		
		Fine Arts Elect.	4		
			17		

*Two quarters of Coop Field Experience will substitute for Engineering 54 and 55. This is an all or nothing substitution, i.e., a combination of one quarter Coop Field Experience and Engr. 54 or 55 is NOT acceptable.

COOP PROGRAM FOR DRAFTING STUDENTS

1. Students must complete first year program including all specified courses in curriculum prior to assignment in coop positions.

2. Applications for program will be accepted from students during last quarter of first year if enrolled in last of required courses.

3. Applications will be screened by the division staff and placed in rank order.

4. The Vocational-Technical Education Office staff will contract employers and arrange student interviews.

5. Students will undergo normal employment screening procedures. Employer may employ or reject. If employed, wages and other conditions of employment will be arranged directly by student and employer.

6. Student will work full time for the quarter being completely responsible to the employer.

7. At the end of the quarter, the student will be released from this coop employment. Unless all A. A. degree requirements are completed, a college coordinated employer-employee relationship must terminate for one quarter.

8. During the last weeks of the quarter the employer will submit to the staff a written evaluation on the employee, including attendance, work habits, etc.

9. During the last weeks of the quarter the student will submit to the staff at De Anza College evidence of three separate projects including calculations, drawings, written specifications and written reports where applicable. If company security or policy prohibits such, an on-site conference and evaluation will be conducted with the job supervisor to examine samples of work.

10. Items 8 and 9 will be reviewed by the DeAnza College staff and be a part of the basis for granting credit.

11. De Anza College staff will review educational opportunities given students based on Item 9 and if changes are necessary will make recommendations to the Vocational-Technical Education Office.

12. Two quarters of Coop Field Experience will substitue for Engineering 54 and 55. This is an all or nothing substitution, i.e., a combination of one quarter Coop Field Experience and Engineering 54 or 55 is NOT acceptable.

3.3j

FOOTHILL COMMUNITY COLLEGE DISTRICT
OFFICE OF TECHNICAL EDUCATION

RESEARCH TEAM FOR ALTERNATE COOPERATIVE EDUCATION

MEMO TO: Faculty and Staff, De Anza and Foothill Colleges

FROM: Peggy Shoenhair and Sid Davidson - June 1, 1974

SUBJECT: Progress report and update on ACE Project

To borrow a phrase from Madison Avenue...*WE'D LIKE YOU TO KNOW*

.....That the first seven months of research, study and investigation leads us to believe that there are some exciting and very real possibilities for creating new types of learning opportunities for students who seek to alternate quarters of full-time school with full-time work in non-traditional and traditional career education internships. *PLEASE READ ON!*

...That the real success of any strong Alternate plan will depend upon the interests and participation of teaching faculty who support the concept that learning and education also taking place "out in the world" where classroom theories and concepts can be tested, measured and authenticated. *THERE'S MORE!*

.....That thus far, faculty from De Anza and Foothill have been very receptive to the research project and several have become active "participants" in a number of ways: We need continued faculty assistance. *NOW READ THIS NEXT!*

.....That over 36% of the De Anza faculty and 45% of the Foothill faculty receiving a questionnaire assessing faculty interest and desire to participate in Alternate Internship opportunities for students returned the questionnaire; 72% reported they were moderately or extensively aware of opportunities available to students...97% reported their personal interest in making such options available was moderate to high; 91% felt their students may or absolutely need such off-campus learning experiences...and only 18% of the respondents suggested that they did not want to be involved in any way in any future development of new learning options for students under the Alternate plan. *HERE COMES ANOTHER!*

.....That some 35% of over 2700 students selected by random sample have returned an extensive two-page questionnaire inquiring into their interests and opinions about such a plan...58% of those respondents had dropped out of college one or more times--frequently because (a) they could not handle work and school simultaneously or (b) they simply had to earn more money for a time and then return to school; [the Alternate plan meets those kinds of needs and many more]...83.4% of the respondents suggested that they would definitely or possibly (or would have) take(n) advantage of an educational plan which would allow them to alternate full-time work and full-time study and actualize classroom learning.

NOW READ ABOUT FACULTY PARTICIPATION IN OUR PROJECT. Do you know...

.....That Ruth Wallace (De A - Bus) was responsible for finding the first experimental job spot (with Hewlett-Packard) and as a result an accounting student is entering the first of several pilot project placements under the ACE experiment?

.....That Roy Potter, Tony Laus and John Reed (De A - Engr) with Paul Trejo's support, have designed a complete curriculum which incorporates the Alternate Education Option for Design Drafting...have had the curriculum accepted by the De Anza Curriculum Committee...and are prepared to implement the program on a pilot basis in the Fall?

.....That Jean Greenbaux (Foot. Lang Arts), hearing that several local school districts are interested in participating with both colleges in utilizing a variety of paid education aides, met with the research team suggesting ways in which students should be prepared for such a program, ways in which on-going in-service training might accompany such a "work out" term for education aides, and proposing a pre-service "summer camp" orientation program for potential ACE Education Aide participants?

.....That several members of De Anza and Foothill Business faculty including Ruth Wallace, Phyllis Yasuda, Larry Harvey, Don Sampson, Walt Maus and Carl Fisher have recommended students to become ACE participants and that several of those students are scheduled for interviews with a local retail firm who will put four accountant trainees onto the program beginning June 17?

.....That Don Leach, Bill Long and Paul Evans (Foot. Engr) have endorsed the concept of Alternate plan for electronics technicians and are recommending students for a pilot project to begin in a local firm this summer?

.....That Dolly Prchal, (Foot. Lib) has modified the existing library technician and audio-visual technician curricula to accommodate ACE options and is prepared to recommend student participants--and that a local school district is prepared to put them on?

WHAT YOU MAY NOT KNOW IS:

.....That in April, 1974, the California Community College Board of Governors approved the implementation of a Title V provision which now allows Community Colleges to grant students academic credit (not to exceed 16 units in this district) for full-time coordinated and supervised field experience. In effect, they have expanded the existing regulations on Cooperative Work Experience to insure the same privileges for students who undertake a quarter of full-time employment when such employment is directly related to an academic program of studies.

.....That this research team is in final negotiations with potential employers to set up pilot programs in Public Service Careers, Education-Aide Careers, Mental Health Counseling, Electronics Technician and Test Specialists, Accounting, and Library/Media Careers. Further, the team in seeking permission of a large federal agency to implement several one-of-a-kind training stations on an alternate model commencing September.

.....That pending renewal of the HEW grant which supports this research and its activities, we hope to continue finding new ways to serve students. BUT WE NEED YOUR HELP. Please contact either of us (District Ext. 518) if you know (a) students who could profit by such a program; (b) employers who would participate by providing full-time, paid employment/learning stations (c) curriculum modifications which would benefit from such a program. Call us, too, if you simply have some suggestions, questions or would like to learn more about what we're doing.

.....And have a great summer. If you get bored and lonesome with all that time on your hands, give us a call...we'll still be here piloting, projecting and trying to make ACE the high card.

3.4 Survey of Two-year Alternate Cooperative Education Programs

In an effort to acquire more information about alternate co-op programs in two-year colleges, a mail survey form was designed and mailed in November, 1973 and February, 1974 to 35 institutions described in the 1973 Directory of Cooperative Education. Although the information in the directory is often ambiguous, we tried to include in the sample every college which reported school terms of approximately 12 weeks, alternate options in five or more disciplines, and programs operational in 1972-3.

The results of this survey are presented in a table and discussed in this appendix. Respondents were assigned code numbers, which appear in the table with the geographic region in which they are located; this allows the reader to locate the responses of a specific institution regarding various academic areas and to compare programs regionally. Our goal was to develop a comprehensive overview of community college alternate cooperative programs rather than focus on specific institutions. [Names of responding institutions will be provided upon request, if they agree.]

The number of survey instruments mailed and returned respectively by geographic areas, are as follows:

	Mailed	Returned	Usable
East	12	9	7
South/Southeast	5	4	4
Midwest	10	6	6
Far West	7	7	6
Canada	1	0	0
	35	26	23

Of the 26 returns, three were not included in the display and analysis because two no longer have operating programs and the third respondent asked us to treat his data with extreme caution in any report or data analysis since it was not a purely alternate model and some responses were "best-guess" approximations but not consistent for all disciplines.

The 23 usable responses from eleven quarter-system and twelve semester-system colleges report an aggregate of 87 disciplines in which co-op opportunities are available for students. The largest number of programs and students enrolled are found in business (9/675+); distributive occupations (7/600+); engineering, pre-engineering, engineering technologies (7/150+), all traditional co-op areas. Other disciplines with moderate enrollments include electronics (5/125+), data processing and medical careers. Science, human and social services, education and fine arts/humanities are seldom reported and enroll small numbers of participants.

Other questions of particular interest to the researchers received these responses. [Reported for each of 87 disciplines from 23 responding colleges.]

A. Are students in fact matched or paired in sets to alternate between school and work?

Yes	28	Some are	2
Yes & No	6	No Answer	6
No	45		

B. For what period of time are students alternating from work to school?

One year	21	Summer only	4
Two years	32	Another answer	9
One or two yrs	6	No Answer	16

C. Is academic credit awarded for the work period?

Yes	73
No	14

D. Do members of the faculty visit job sites regularly during the work term? If yes, on what basis?

No visits	3
At least 1 visit per term	57
At least 2 visits per term	3
At least 3 visits per term	7
More than 3 per term	1
Answer "Yes"	9
No Answer	7

Whether the programs operated on a quarter or semester system seems not to affect responses to any questions asked.

Summary. A mail response to a questionnaire received from 23 two-year quarter and semester system colleges listed in the Directory of Cooperative Education as having 5 or more programs operating in alternate rotation suggests that (1) the greatest number of students are participating in the traditional occupational co-op placements; (2) students are truly matched or paired in about half the co-op placements; (3) many programs allow students to alternate for two years of time; (4) credit is awarded in 85% of all the 87 programs reported in the survey; and (5) faculty coordinator visits to the job site are made at least one time per term in all but three of 87 programs reported, and some few program visits are more than one time per term.

There appears to be broad consistency in responses to these inquiries of rather generalized program operating methods. None of the questions asked in the instrument gets to the heart of the question of the type of student served or the services available to students through the cooperative program; although this was by design not an intent of the instrument, we suggest that it could be a useful follow-up inquiry of those program directors who replied and another group of respondents who could be selected from the Directory at a future date.

TWO-YEAR COLLEGE SURVEY OF PROGRAM STATUS
Responses from 23 Institutions

ACADEMIC MAJOR	REGION	COLL.#	NO. ENR.	STUDENTS PAIRED? Yes	STUDENTS PAIRED? No	CO-OP DURATION 1 yr	CO-OP DURATION 2 yrs	Smr Only	GRANT CREDIT Yes	GRANT CREDIT No	Visit Freq.	COMMENTS
Accounting	M	7	8	some		yes	yes		3, max 12		1	
	M	14	$\pm$20		x	N/A*			yes		1	
	E	13	N/A		x		x		yes		1	Mandatory Co-op College
	E	16	116	x		x				x	1	
	E	18	N/A	N/A		x			yes		N/A	
	E	20	12	x			x		5		1	
Aviation Administration	E	20	10	x			x		5		1	
Biological Sciences	S	12	1	x		see comment				x	none	Duration="Qtr by qtr"
Business/Advertising [except DP, sec'l, office]	S	2	25		x		x		3		1	
	W	4	N/A		x			x	12		3	Summer term co-op only
	W	6	25		x	N/A			yes		3	
	S	11	275	x		x			yes		1	
	E	13	N/A		x		x		yes		1	Mandatory Co-op College
	S	15	40		x	N/A			3		2	
	E	16	193	x		x				x	yes	Advertising
	E	20	5	x			x		5		1	
	M	21	95		x		x		4		1	
	M	14	20-5		x	N/A			x		1	"Management"

*N/A = No Answer

ACADEMIC MAJOR	REGION	NO. ENR.	STUDENTS PAIRED?		CO-OP DURATION			GRANT CREDIT		Visit Freq.	COMMENTS
			Yes	No	1 yr	2 yrs	Smr Only	Yes	No		
Drafting	W 3	42		x	see	comment		x		1-2	"Quarter as appropriate"
	W 6	3		x	N/A			x		3	
	S 12	N/A	x		see	comment			x	1	"Quarter as appropriate"
	E 18	N/A	N/A		x			x		N/A	
Education	S 2	25		x		x		3		1	
	E 13	N/A		x		x		3, max 9		1	Mandatory Co-op College
Electronics/E Tech	S 2	20		x		x		3		1	
	W 6	3		x	N/A			x		1	
	E 16	100	x		x				x	yes	
	E 18	N/A	N/A		x			x		N/A	
	E 20	2	x			x		5		1	
Engineering/Pre Engr	S 2	15		x		x		3		1	
	S 11	249	x		x			x		1	
	S 12	1	x						x	no	
Finance, Insurance, R Est	E 16	69	x		x				x	yes	
	4	N/A		x			x	x		3	
Fine Arts/Humanities	S 2	20		x		x		3		1	Fine Arts
	S 2	30		x		x		3		1	Humanities

ACADEMIC MAJOR	REGION	NO. ENR.	STUDENTS PAIRED?		CO-OP DURATION			GRANT CREDIT		Visit Freq.	COMMENTS
			Yes	No	1 yr	2 yrs	Smr Only	Yes	No		
Chemical Science/Tech	S 12	N/A	x		see	comment			x	1	"Quarter by quarter"
	E 18	N/A	N/A		x			x		N/A	
Civil Engr/Civil Tech	E 16	90	x		x				x	yes	
	E 18	N/A	N/A		x			x		N/A	
	E 20	2	x			x		5		1	
Data/Computer Processes	S 2	10		x		x		3		1	
	M 7	6	x &	x	x &	x		3, max 12		1	
	S 12	N/A	x		see	comment			x	1	"Quarter by quarter"
	E 13	N/A		x		x		3, max 9		1	Mandatory Co-op College
	M 14	20-5		x	N/A			x		1	
	E 18	N/A			x			x		N/A	
	E 20	13	x			x		5		1	
Distributive Occ's Mktg, Mdsg, Retailing	M 7	55	x &	x	x &	x		3, max 12		1	
	M 14	20-5		x	N/A			x		1	
	E 16	125	x		x				x	yes	
	E 19	100		x	see	comment		3		2	8 wks of 1st sem of 1st yr
	E 20	11	x			x		5		1	
	M 21	70		x		x		4		1	
	W 22	219	x		N/A			1		2	

ACADEMIC MAJOR	REGION	NO. ENR.	STUDENTS PAIRED?		CO-OP DURATION			GRANT CREDIT		Visit Freq.	COMMENTS
			Yes	No	1 yr	2 yrs	Smr Only	Yes	No		
Hotel, Restaurant, etc	E 14	20-5		x	N/A			x		1	Hotel, Motel
Parks & Recreation	E 20	3	x			x		5		1	Parks & Recreation
	M 21	30		x		x		4		1	Hotel & Restaurant
Human Svcs, Psych, Soc	M 1	12		x	see comment			x		1 monthly	Total of 12 units max
	S 11	25	x		x			x		1	
	E 13	N/A		x		x		3, max 9		1	Mandatory Co-op College
Law Enforcement	W 6	13		x	N/A			x		1	
	E 14	20-5		x	N/A			x		1	
	E 20	2	x			x		5		1	
Medical Fields	M 7	N/A	x &	x	x &	x		3, max 12		1	Dental Assisting
	W 3	34		x	N/A			x		1-2	Radiology
	M 7	5	x &	x	x &	x		3, max 12		1	Medical Assisting
	M 7	N/A	x &	x	x &	x		3, max 12		1	Rad Tech
	M 21	5		x		x		4		1	Hospital Mgmt
Secretarial/Office	W 6	N/A		x	N/A			x		3	Secretarial
	M 7	82	x &	x	x &	x		3, max 12		1	Gen'l, Chem, Legal
	E 13	N/A		x		x		3, max 9		1	Mandatory Co-op College
	M 14	20-5		x	N/A			x		1	Office
	E 16	33	x		x				x	yes	Secretarial
	E 20	4	x			x		5		1	Secretarial
	M 21	10		x		x		4		1	Executive Secretarial

ACADEMIC MAJOR	REGION	NO. ENR.	STUDENTS PAIRED?		CO-OP DURATION			GRANT CREDIT		Visit Freq.	COMMENTS
			Yes	No	1 yr	2 yrs	Smr Only	Yes	No		
Science Fields	S 2	15		x		x		3		1	Science
	W 6	N/A		x	N/A			x		3	Oceanography
	E 16	43	x		x				x	yes	Lab Tech
Other & Technologies	W 4	N/A		x			x	x		3	Welding, Machining Well Digging
	W 6	47		x				x		3	Ind'l Mechanics, Forestry Livestock Techs & Commercial Fishing Pgms
	E 16	62	x		x				x	yes	Mech Tech
	E 18	N/A	N/A		x			x		N/A	Ind'l & Mech Tech
	M 21	20		x		x		4		1	Auto Replacement Mgmt
	E 13	N/A		x		x		3, max 9		1	Occupational Therapy
Colleges Responding "All programs have ACE"	M 8	150 per yr	some		varies			1-4		yes	
	S 9	4		x		x		4		no	Bus & Soc Wk
	M 10	260		x			x	x		1 per wk	23 programs

LEGEND. Region: E=East, M=Midwest, S=South/Southeast, W=Far West. Numbers represent college identification coding.

No. Enr: Respondent's report of number of students enrolled annually in the major who are assigned to cooperative field experience.

Visit Freq: The frequency with which faculty coordinators visit job sites.

FOOTHILL
COMMUNITY
COLLEGE
DISTRICT

DE ANZA &
FOOTHILL COLLEGES

12345 El Monte Road
Los Altos Hills
California 94022
(415) 948-3523

The Foothill Community College District with campuses in Northern Santa Clara County, California, has been awarded a grant under HEA Title IV-D to conduct a feasibility study and design a model program for implementing an Alternate Plan for Cooperative Education for use in a quarter system college.

The Directory of Cooperative Education includes information on your existing program which we feel would be valuable to use in the initial stages of our investigation. We would greatly appreciate receiving your response to the enclosed questionnaire at an early convenience.

If there is additional information which may be of value to us, or brochures and related printed material you could share with us, we would appreciate receiving it. Thank you for your time and assistance in our behalf.

Sincerely,

S. H. Davidson
Director, Cooperative Education

SHD:jd

ALTERNATE PLAN COOPERATIVE EDUCATION

QUESTIONNAIRE

1. What major fields of study or disciplines or programs can participate in an alternate program?

A. ______________________ F. ______________________

B. ______________________ G. ______________________

C. ______________________ H. ______________________

D. ______________________ I. ______________________

E. ______________________ J. ______________________

2. Approximately how many students are currently participating in those programs?

A. _______ C. _______ E. _______ G. _______ I. _______

B. _______ D. _______ F. _______ H. _______ J. _______

3. Are students in fact matched or paired in sets to alternate between school and work?

Yes _______ No _______

4. For what period of time are students alternating from work to school?

1 Year _______ 2 Years _______ Other ______________________

5. Is academic credit awarded during the work period?

Yes _______ No _______ If yes, on what basis? ______________________

____

6. Do members of the faculty visit job sites regularly during the work term?

Yes _______ No _______ If yes, how often? ______________________

____

7. Can you enclose a calendar or schedule which displays the rotation of students from work to school?

Yes _______ No _______ If yes, please enclose

____
Name/Title of Person Completing Reply

____
College or University and Address

____
City State Zip

3.5 Survey of Exemplary Ohio and Washington Cooperative Education Programs

In the Spring of 1973, the ACE Project Director visited six institutions which had been identified through the literature, the Directory of Cooperative Education or the recommendations of knowledgable co-op directors and consultants as exemplary cooperative education programs operating on a quarter system. Three colleges were two-year community colleges in Ohio; one was a two-year college within the University of Cincinnati system; one was a four-year university in Ohio and the sixth was a four-year liberal arts university in Washington.

Each program director and some students and faculty participants were asked to respond to a series of questions to determine information important to the ACE research, and each was asked to elaborate upon other aspects of the program. The following pages present a brief review of the observations made; a list of the areas discussed during these meetings is attached.

The Cleveland State University, a four-year state public higher education institution acquired by the Regents of the State of Ohio in 1965 from what was formerly Fenn College, operates a quarter-system cooperative education model for students seeking field experience in a broad range of disciplines. In addition to traditional fields of business, engineering and management, students in nontraditional programs including history, languages, human and social services and in undeclared majors have options for co-op. Over 1500 students in 47 declared majors and graduate studies within five colleges of the University [Arts & Science, Business, Education, Engineering, Graduate Studies] may alternate 11-week quarters of work and study on a full-time basis. Fall of the sophomore year is the first co-op experience for most students and the heaviest enrollment is among junior class students. Participating in a co-op program extends almost all student programs to five years.

Student requirements include at least the following:

1. Participation in a 13-session employment orientation class, a graded class with assignments, examinations and written projects
2. Development of measurable performance objectives
3. Continuing intern and co-op assignment reports
4. Contact and interaction with field coordinators
5. Student evaluations of the program as an educational venture
6. Preparation of a professional resume for filing into student's permanent file and for future dissemination

The program appears to the observer to be extremely well organized if evaluated on the basis of extent of planning; quality of published materials, forms and documents; interface with employers and faculty participants by the co-op education staff; counseling and placement support services attendant; in-service preparation of co-op staff; selection and placement of students.

This observer visited with employers and students in the program, met with the Director and three coordinators. We sensed good rapport between staff and high acceptance of the quality of the program by employers and students.

There are several forms and reports which are utilized by the staff in the co-op office. Each appears to be well designed and appropriate to its purpose and none seems redundant or superfluous. A student "handbook" consisting of statements of purpose, a set of critical forms and assignment sheets and general information is available to all student applications or prospective employers of the program.

The Director and his staff were most generous in their time with this visitor; employers were cordial and cooperative. Others seeking to visit an exemplary, four-year, quarter-system cooperative education program would find the time invested at The Cleveland State University well used.

The Cincinnati State Technical College, a two-year technical institute which combines technical education program instruction with cooperative work experience, was established by the Cincinnati Board of Education in 1966 and transferred to the Ohio State Board of Regents in 1969. The College operates five 10-week quarters year round; in a two-year (24-month) degree-granting program all students participate in five quarters of full-time instruction and five quarters of full-time employment. Degrees are offered in eight Business Technologies, five Engineering Technologies, five Allied Health Technologies and six Industrial Technologies. Approximately 1300 students and 400 employers participated in the cooperative venture during the 1972-73 academic year.

Because cooperative education is a critical element of the educational plan at the College, the administration and planning for the program appear to the observer-visitor to be highly organized and carefully evaluated. Emphasis is on meeting student potential and ability with reasonable job placement and, through instruction and counseling, expanding the potential for increasingly difficult job and academic assignments. Our conversation with the Vice President for Cooperative Education and Development led us to conclude that the institution is student centered, flexible in its ability to modify and expand program offerings and content, and has developed a strong alliance with the employer community. A minimum of forms, reports and "paperwork" was in evidence; a useful student handbook is available to all applicants; the college catalogue is clear and useful and contains little extraneous writing.

This visit was with the vice president; no employers or students were visited due to time constraints. If the vice president reflects the general tenor of the College, it is an institution with a clearly defined mission of meeting student and employer needs, good academic standards and an on-going program of self-evaluation.

Sinclair Community College, Dayton, Ohio, in 1966 became the public community college for Montgomery County. A comprehensive college, Sinclair offers two-year degrees and one-year certificates in 27 career-centered areas of study in business, engineering and industrial, allied health and public service technologies plus fine and performing arts.

Serving over 6,000 students (1972-3) on a four-quarter academic calendar, the college provides alternate cooperative education opportunities in all instructional areas. Students are carefully coordinated and counseled during their participation in the co-op program, and normally stay for two work periods with an employer.

Our visit with the cooperative education director, the dean of instruction and a coordinator of the business co-op students was warm and cordial and each was willing to share generously from experience. Because of its proximity to the Antioch campus in Yellow Springs, Sinclair enjoys the advantage of an employer community which is supportive of the co-op model and a student population for whom participation is a common part of academic planning even though it is a voluntary program for students.

Dr. J. Dudley Dawson from Antioch also met with the writer for nearly two hours to discuss the evolution of the Sinclair program and generally define activities in Ohio and other eastern two-year college programs. Dr. Dawson supported our observation that the Sinclair program was well organized, carefully administered, displayed high academic integrity in its treatment of students and employers, and is a credit to the college. Three student participants we met support the notion that coordiation was frequent and helpful, that employers were strongly in favor of the college program and that increasing student interest in the model was evident. Students described rather demanding course requirements which attend the co-op program each quarter: a series of writing assignments, critical incident analyses and case analyses are required. Students are advised in advance of the writing requirements for grades of A, B, C, or no pass. There appears to be clear communication of program requirements for participation in this program.

Cuyahoga Community College District, Western Campus, Parma, Ohio. This district was Ohio's first public community college and serves the greater Cleveland area with a metropolitan campus in downtown Cleveland, an eastern campus in Warrensville Township and a western campus in Parma. The enrollment in 1972-73 was approximately 21,000, the fifth largest community college district in Ohio.

Despite information to the contrary in the Cooperative Education Handbook, the only cooperative education program is at the Parma campus and it is not an Alternate Plan. Parma campus has approximately 40 students enrolled in cooperative distributive and office education on a parallel plan for students who work an average of 15 hours or more per week. A student may receive one to two units per quarter, one unit for every 15 hours of employment per week, and may accumulate a maximum of ten units toward a degree program. Degree programs require between 90 and 110 quarter units depending upon the program and department of study.

In lieu of seminars for students in the co-op program there is a set of assignments defined in an assignment handbook which students are to complete. These include business reports or office occupation reports for each student during each quarter of enrollment; the format, evaluation procedure, and the anticipated content are clearly defined.

There are little differences between the program at Tri-C and most traditional California Work Experience Programs. This is particularly true in terms of length of enrollment, length of time with employer, payment schemes, termination for cause, the breath of occupational opportunity (although that is now limited), rotation within company assignments, and other areas of student and employer processes. Students receive no scholarships, grants or other financial assistance because of enrollment in the program; the college receives no funding from state or federal grants nor does it enjoy any other outside financial support. The program produced no brochures, newspapers or house organs, and only occasional promotional materials. Little promotion of co-op in business, industry or throughout the community occurs other than individual contacts by one of the three instructors involved. The entire program is evaluated "periodically" by the department head.

The Ohio College of Applied Sciences, founded in 1828 and merged with the University of Cincinnati in 1969, is one of four colleges of the University which offers alternate cooperative education program options to its students. Located in downtown Cincinnati within a few miles of the University main campus, the OCAS is a two-year college of the University which offers field experience to students in accounting, business data processing, retail marketing and small business and franchise management plus architecture, building, chemical, civil, electrical and mechanical technologies. For many students enrolled at the College, this may be the last formal education since only approximately ten percent transfer to the University campus and another 10-12 percent transfer to any other four-year institution.

Over 95% of all students in the program are paired; very few ever work out two consecutive quarters and then only at the express request and convenience of the employer who otherwise would not participate. Students receive academic credit for two work out periods and most students are enrolled to work out only after a full year of successful academic performance on campus.

During any quarter, approximately 200 students are out on business-related field experience assignments from OCAS and another 200 in the technologies; the program director reported that his college "...supplies more co-op students than all other colleges (of the University) combined." Student evaluation is done by job supervisors and most coordination contact is by telephone between job supervisors and the cooperative education office. Program evaluation is performed by a dean at the University and by "...an overall, university-wide committee." There is no significant promotion or publication of the program into the business/industrial community and little use of media support; most contact of this nature is generated within the program office on campus.

The OCAS cooperative program appears to be student-centered for the express purpose of giving students practical access to hands-on experience to actuate classroom theory and concept. The outside observer might well conclude that this is but one of several goals and objectives of the college and not necessarily a central effort. A large number of the 600-700 students enrolled are evening college students who work full time during the day; the cooperative education participants are traditionally defined day college students. Our visit with the director was cordial and informative; it would have been useful had time or circumstances permitted our visiting students and employers at the job site.

The University of Puget Sound is a privately-endowed university with a college of liberal arts and science; a school of business, administration and economics; a school of music; a school of occupational therapy; and a newly established law school. Located at the center of the city of Tacoma on the Puget Sound, the University has a student body of approximately 2,600 students from 49 states and 26 foreign countries. Tuition, room and board, fees and academic expenses are approximately $3,000 per year; therefore, the cooperative program is essential to many students.

Over 200 interns are employed each semester through the Cooperative Education Program on alternate semesters. Over 50 employers participate, located in New York state, Denver, Los Angeles, San Francisco, and Fairbanks; the majority, of course, are in the Seattle-Tacoma Puget Sound area. A semester's income averages approximately $450 a month for each intern. Approximately 30 percent of all interns are transfer students from two-year colleges, and this percentage is increasing.

Students enroll into a co-op model at the outset of their junior year for two full years including summer terms. They intern with a single employer two times, and sometimes three. There is no planned rotation between employers. Evaluation is performed by employers and field coordinators twice each semester; academic performance during the "campus terms" is a part of the overall evaluation. Students earn academic credits for the internship terms.

Some company-initiated contracts for employment with students exist, but no formal contracts between company and college exist. Payment to students is negotiated individually, but the college recommends no less than $450 per month minimum. Students may be terminated for cause by the employer in concert with the university; no evidence of termination for economic reasons has been noted. Cooperative opportunities covering a broad scope of merchandising, marketing, ship building, public utility, banking and finance, insurance and underwriting, oil refinery and chemical, paper and pulp production. Some students are on rotation plans in their job assignments while others are on specific, defined assignments.

Periodic seminars are held, but no formal schedule is in operation. Placement of applicants appears to meet the interests and needs of both students and employers, and the number of terminations, either voluntary or for cause, is extremely small.

A series of questions regarding cost and finance was asked of the program director, the university dean, and the director of financial aids. At UPS, the program is funded from current operating budget plus a small, one-time, three-year grant from Weyerhaeuser Corporation. No state or federal grant funds support the program. The cooperative program prints necessary in-house forms and two effective but modest-cost brochures. No newsletter is published, although an occasional PR "newsy" letter goes out from the director's office to all participants.

To investigate the perceived value of the program to students, employers, and the university, we visited with approximately a dozen students, spent one full day with employers in marketing, banking, production & investments, and posed questions to the director of admissions, the academic vice president, the registrar, the director of financial aids, the dean of the business school, the director of the program and the secretary to the director.

Our appraisal of this University's program is that it provides an outstanding model after which a district might consider building a Cooperative Education Program -- Alternate Plan. The major concern of all University of Puget Sound personnel is the educational relevance of the career internship. The program seeks both academic and performance-standard integrity; both appear to be rigorous and demand a student with commitment.

AREAS OF DISCUSSION WITH COOPERATIVE EDUCATION PROGRAM DIRECTORS DURING INSTITUTIONAL VISITS, SPRING 1974

1. Organization and Design
    a. Student enrollment term
    b. Length of enrollment
    c. Time with employer
    d. Rotation between employers
    e. "Pairing" of students
    f. Assessment and evaluation
    g. Academic credit
2. Cooperating Employers
    a. Agreements and contracts
    b. Payment schemes
    c. Termination for cause or economic pressure
    d. Breadth of occupational opportunity
    e. Rotation within company assignments
3. Students and Progresses
    a. Selection process & criteria
    b. Seminar participation
    c. History of placement and persistence
    d. Use of committee selection
    e. Causes for campus staff termination of student
4. Costs and Finances
    a. Financial assistance, grants, scholarships
    b. Program funding (IV-D?)
    c. Foundation and institutional financial support
5. Publications and Other
    a. Brochures, newspapers, house organs, promotional
    b. Promotion through industry/business community
    c. Media support
    d. Alumni support
    e. Evaluative criteria--by whom, how often, form
6. Miscellaneous Areas

3.6 Program Information and Sample Forms

FOOTHILL COMMUNITY COLLEGE DISTRICT
OFFICE OF TECHNICAL EDUCATION

ALTERNATE COOPERATIVE EDUCATION AT DE ANZA AND FOOTHILL COLLEGES

Alternate Cooperative Education integrates formal classroom learning and on-the-job experience. Employers open full-time, paid positions, for one year or more, which students fill on a rotating basis. Some students will work two quarters for the same employer, while others may have only one term of field experience. Academic credit is awarded for the learning which occurs in the employment-learning station, and work experiences are integrated into each student's course of study.

Community college students vary greatly in educational preparation, interests, and abilities. Many adults, including growing numbers of women and veterans, are enrolled at De Anza and Foothill Colleges, as are many bilinguals and members of minority groups. Candidates for ACE range from young people direct from high school through individuals with some college work in many academic and vocational concentrations to persons with college degrees seeking retraining into new careers.

De Anza and Foothill Colleges conduct recruitment, screening, career advisement, counseling and other career-development activities for candidates for ACE openings. All the services and programs of the Colleges are also available to current employees seeking or referred by participating employers for further training: such employees may participate in the ACE program if the employer will arrange their schedules, work responsibilities and supervision so they can receive the full educational benefit of the program. The college will refer several qualified applicants for each position committed to ACE; the selection of any student-employee, however, is the responsibility of the employer. Regular credentialed members of the college faculty coordinate the students. With the job supervisor, the faculty coordinator and the student identify measurable learning objectives which can be accomplished during the student's work period. The faculty field coordinator provides as much visitation, consultation and support as is helpful to the student and supervisor without disrupting the work station. Coordinator/student consultation during office hours and by telephone is continuous. Both the supervisor and the college instructor formally evaluate the student's performance. In addition, employers and Foothill District personnel monitor and evaluate closely the overall program and individual learning stations and students in the program. Participating employers commit one or more full-time positions to the program, for one 12-month year, paying a modest stipend. They employ students for three or six-month periods. The terms and conditons of the agreement between the college and participating ACE employer are in a written statement signed by representatives of both parties. Employers agree to give the ACE student careful supervision and, if at all possible, increasing responsibility in second work terms.

In contrast to many part-time or volunteer situations, Alternate Cooperative Education students will be full-time employees gaining valuable career experience in challenging, responsible positions. Employers find them very capable, highly motivated and eager to learn.

FOOTHILL COMMUNITY COLLEGE DISTRICT
Research Team for Alternate Cooperative Education

OFFICE OF TECHNICAL EDUCATION

MEMO TO:

SUBJECT: Opening for Alternate Plan Internships - Accounting Clerk/Authorizer

FROM: P. Shoenhair/S. Davidson

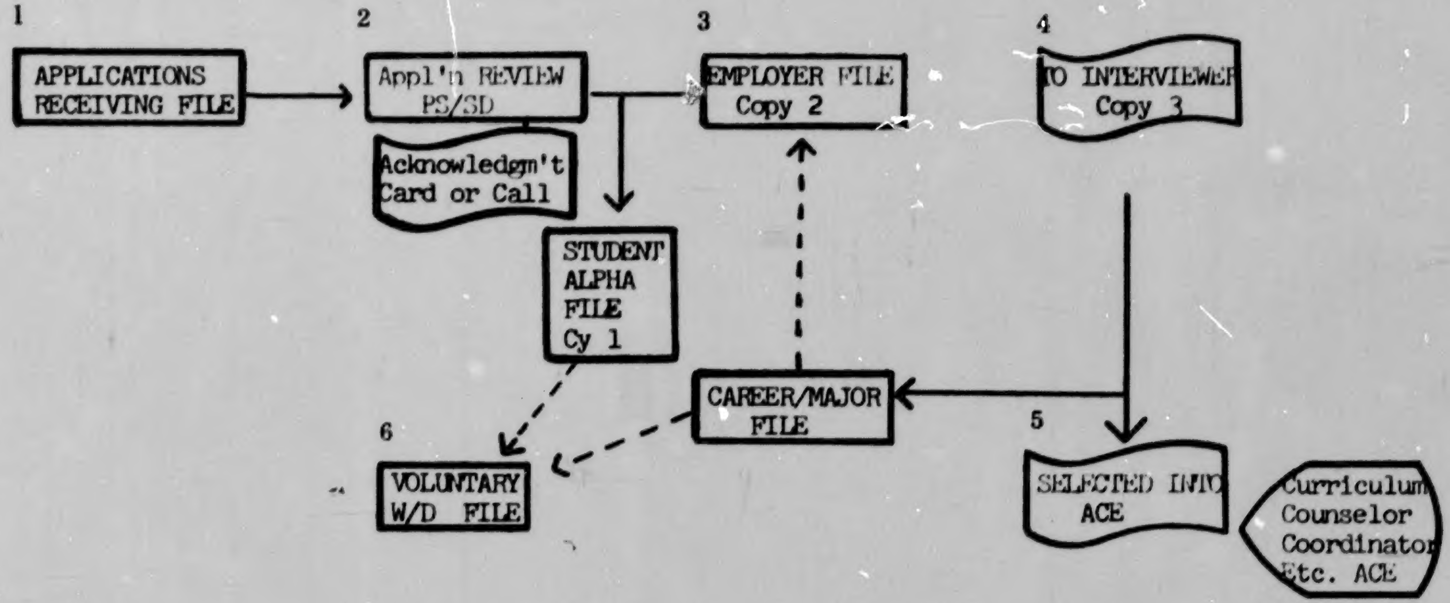
DATE: May 21, 1974

The following placement is available for female and male students who are available to begin employment full-time on or about June 17, 1974 and return to campus for the Fall term, work out during the Winter term and return to campus again during the Spring term.

Students interested in such an Alternate Cooperative Education opportunity should complete the application available in the Office of Technical Education. Please do not refer students seeking part-time employment or students who do not plan to return to college to continue their education at De Anza or Foothill.

Job Title:	Accounting Clerk/Authorizer
Salary:	$2.55 or more per hour - 40 hrs.
Duties:	Entry level accounting including posting, invoicing, accounts payable, authorizing or a combination thereof. Should understand accounting cycle or be facile on 10-key operations.
Employer:	Major local retailer
Conditions:	Student must participate in Alternate Cooperative Education program and plan to return to De Anza or Foothill during the Fall Quarter, 1974. Must possess not less than "C" (2.0) gpa in all course work.
Requirements:	Accounting lA or Business 60 or Business 8l
APPLY:	Office of Cooperative Education, Foothill District
INFORMATION:	Ms. Shoenhair or Mr. Davidson, 948-3523, Ext. 519

FLOW CHART OF ACE STUDENT APPLICATIONS


1
APPLICATIONS RECEIVING FILE
2
Appl'n REVIEW PS/SD
Acknowledgm't Card or Call
3
EMPLOYER FILE Copy 2
STUDENT ALPHA FILE Cy 1
4
TO INTERVIEWER Copy 3
5
SELECTED INTO ACE
Curriculum Counselor Coordinator Etc. ACE
CAREER/MAJOR FILE
6
VOLUNTARY W/D FILE

1. Application received in ACE Project office.
2. Placed into Application Review File. Student receives acknowledgment card or phone call.
3. Placed into current employer file (Cys 2 & 3) and Student Alpha File (Cy 1).
4. Copy 3 forwarded to interviewer.
5. Students selected enrolled into ACE program; unselected filed into Career/major file for further reference to interviews, continuous loop recycle unless unfit for employment.
6. Students who seek to be removed from consideration for placement into voluntary withdraw file/or unemployable file.
7. (Not shown): Advise referral staff member of selection when student placed with ACE participating firm.

ACE1

De Anza ________

FOOTHILL COMMUNITY COLLEGE DISTRICT
ALTERNATE COOPERATIVE EDUCATION PROGRAM

Foothill ______

1. Social Security Number ____/____/____ Phone ____________ Date ____________

2. Name ____________________ Sex ________
Last First Middle Initial

3. Address ____________________ Zip Code ________
Number Street City

4. Birthdate ____________ 5. Citizenship: U.S.A. ____ Other ________

6. Married ________ Single ________ Number of Dependents (incl. Self) ________

7. Have you been in the military services? ______ Branch ______ Type Discharge ________

8. Are you a high school graduate? ____ If so, where? ____________

9. Number of college terms completed? ______ 10. Plan to Complete 1 2 3 4 College years (circle one)

Units completed to date? ______ Overall GPA? ______ GPA in major? ______

10. Do you now hold a degree? ______ AA ____ BA ____ Other ________

11. In what type of program are you enrolled? Degree ____ Certificate ______ Other ________ (Specify)

Are you attending DAY ____ NIGHT ____ BOTH ____

12. Major ____________ Counselor ____________

13. Alternate Cooperative Education Information:

A. Why have you applied for this alternate program?

1. Referred by faculty ________ (Name) 2. By counselor ________ (Name) 3. By employer ________ (Name)

4. Referred by Placement Office at ________ College 5. Referred by friend ______ by myself ______

6. Other ____________

B. How do you expect to benefit from the program? ____________________

____

____

C. Number of credits earned in past Work Experience Education programs? ________

14. (Optional) Check one of the following categories:

Native American Indian ______
Afro-American, Black, Negro ______
Asian-American ______
Chicano, Mexican-American
Spanish-American Surname ______
White/Anglo ______
Other, Please Specify ______

15. Are you presently employed; YES ____ NO ____ DAY ____ NIGHT ____ OTHER ________

If yes: Company ____________ Supervisor Name ____________ Phone No. ________

Address ____________ Student Work Phone No. ________

City ____________ Building/Room or Location ________

16. How long employed? ____________ Type of Work ____________

17. How many hours per week are you working? ____________

18. List the following items for previous employment: (Begin with latest)

	Name of Employer	Type of Work	Dates of Employment From	To
a.				
b.				
c.				

OFFICE USE ONLY:

Referred to/date ____________________

____

____

NOTE:

ACE 2

FOOTHILL COMMUNITY COLLEGE DISTRICT
WORK EXPERIENCE EDUCATION PROGRAM

De Anza______ Foothill______

STUDENT'S NAME____________________________________

When you enroll in the Work Experience Education Program, some time spent at work is counted as time spent at school, and school credit is given according to the regulations of the State and District Boards of Education.

One of the main objectives of the program is to help you to gain greater maturity by accepting responsibilities and handling them successfully in a real work situation. To gain the right kind of work experience and to receive credit for it, you must meet the obligations listed in this agreement.

STUDENT AGREEMENT

I understand the purpose of Alternate Cooperative Education (ACE) and agree to abide by the following regulations in order to receive credit upon successful completion of the course.

1. I will report to my work-learning station promptly and regularly, or notify my employer before I am due at work if illness or emergency prevents my going to work that day.
2. On the job, I will be properly groomed, honest, courteous and willing to learn under supervision. I will comply with all reasonable employer requests.
3. I will attend the Career Development Seminars during each quarter in which I am enrolled in Cooperative Education.
4. I understand I must work an average of 5 hours per week for each unit of credit earned each regular quarter of enrollment in the ACE program.
5. I will enroll in college courses during the work term only with prior approval of my coordinator.
6. I will maintain at least bi-weekly contact with the faculty coordinator and comply with all reasonable requests of the coordinator.
7. I will notify the coordinator in advance of my intention to drop or change my employment. If I am to be released from my job before the end of the quarter, I will notify the coordinator immediately.
8. I will submit a record of hours worked to the Cooperative Education Secretary by the first Monday of each month.

I have read all of the foregoing statements, and I agree to accept and fulfill these obligations as a participant in the Foothill Community College District Cooperative Education Program. I understand that my work will be evaluated before I am allowed credit for any quarter's participation. *I further understand that I may be denied credit in any quarter for any one of the following reasons:* unsatisfactory work performance, failure to meet established performance objectives or fulfill any obligation listed above (especially #3, 4 and 6), poor attendance, discharge for cause.

Student's Signature	Social Security #	Today's Date
Coordinator's Signature	Coordinator's Phone #	Today's Date

ACE20974 Original to Co-op Office-Yellow to Coordinator-Pink to Student

ACE 3

De Anza ________
257-5550

FOOTHILL COMMUNITY COLLEGE DISTRICT
ALTERNATE COOPERATIVE EDUCATION PROGRAM
EMPLOYER'S STATEMENT OF COOPERATION

Foothill ________
948-8590

The major purpose of this program is to provide valuable educational and learning opportunities through work experience for college students. This form is neither a contract nor a letter of agreement: Rather it is a statement of the degree of participation which the employer is willing to embrace as an educational facilitator. The requirements of the California Education Code or of the State Plan for Vocational Education under which the college must operate the program are stated below (references in parentheses) as the guidelines.

TO INSURE A SUCCESSFUL LEARNING EXPERIENCE THIS TERM FOR ____________________
(Name of Student Participant)

WE WILL COOPERATE WITH THE ALTERNATE COOPERATIVE EDUCATION PROGRAM IN THE FOLLOWING WAY:

1. Providing a continuous, full-time (30 hours per week or more) field experience employment opportunity from ____________________ 197__ to ____________________ 197__.

2. Providing appropriate learning opportunities and continued supervision. (EC 55257)

3. Planning a varied program of job activities so that this student may receive maximum educational benefit. Some of the performance objectives the student is expected to achieve, or educational experiences which will be offered are: (EC 55257) (Plan Ch 9.24)

   a. The student shall ____
   b. The student shall ____
   c. The student shall ____
   d. The student shall ____

4. Offering students on their second or subsequent Cooperative Education placement increasingly responsible assignments and learning opportunities.

5. Providing working conditions that will maintain this student's physical and mental health, physical safety, and high ethical standards. (EC 55257)

6. Providing appropriate compensation insurance as required by law (i.e. Workmen's Compensation). (EC 55257)

7. Conferring with this student's Cooperative Education Coordinator regarding his progress or need for additional help of any kind. (EC 55255)

8. Providing the college with State-required attendance verification and performance ratings of the student's achievement in the educational experience [#3 above, not a total job evaluation]. (EC 55257)

9. Supervise the student in the following job: (EC 55256)

Type of work ____
Beginning ____________________ 197__ and ending ____________________ 197__
Work Hours ____________ Days ____________ Location ____________
FIRM NAME ____________________ Telephone ____________
ADDRESS ____________________ City ____________

Educational cooperation endorsed by:

____
Supervisor's or Administrator's Signature

Today's Date ____________________

Title or Department ____________________

Witnessed by:

____
Work Experience Education Coordinator

Telephone ____________________
If unavailable, please leave message.

Original to Co-op Office-Yellow to Coordinator-Pink to Employer-Gold to Student

WE 5

De Anza ______
257-5550

FOOTHILL COMMUNITY COLLEGE DISTRICT
COOPERATIVE WORK EXPERIENCE EDUCATION PROGRAM
EMPLOYER EVALUATION OF STUDENT

Foothill ______
948-8590

Student ______________________ Firm ______________________

Coordinator ______________________ Coordinator's Phone No. ______________________

PLEASE RETURN TWO COPIES OF THIS EVALUATION NOT LATER THAN ______________________

When this student entered the Cooperative Education program, or subsequently when his continuance was being considered, certain educational objectives for the student were endorsed by a company educational participant and a faculty coordinator.

The purpose of this evaluation form is to indicate the degree to which the student achieved these educational objectives. *This form is NOT intended to provide a total employee evaluation;* it is an evaluation of the portion of the student's work performance that relates to his Cooperative Education program obligations.

Please check the areas that best describe this student's performance, discuss the evaluation with the student, and retain your copy of the form for future reference. Your evaluation will help in counseling and in improving the student's performance.

Rating Criteria (to be applied to student's achievement of the obligations stated on WE 3)

Excellent:	**Student fulfilled this requirement *at the highest level;* performance is typically of *high quality.***
Satisfactory:	**Student fulfilled this requirement *adequately;* student made acceptable progress toward meeting this obligation; performance is typically of *acceptable quality.***
Poor:	**Student did not fulfill this requirement adequately; student made poor or little effort in meeting this obligation; performance is *frequently inadequate* or of *unacceptable quality.***
Not applicable:	**This evaluation category not applicable to the stated objectives.**

Type of work student performs ______________________

WORK QUALITY	Excellent	Satisfactory	Poor	Not applicable	COMMENTS
Quality of work					
Judgment in handling responsibilities					
Ability to follow instructions					
Proficiency in planning and organizing					
Compliance with instructions and rules					
Attendance -- punctuality & regularity					
ATTITUDES					
Interest in meeting objectives					
Courtesy and rapport					
Ability to work with others					
PERSONAL QUALITIES					
Dress					
Cleanliness and neatness					

______________________ ______________________ ______________ ______________

Evaluator's Signature Title or Department Phone Date

Return two copies to WEE Secretary - Keep third copy

WE 6

De Anza ______
257-5550

FOOTHILL COMMUNITY COLLEGE DISTRICT
COOPERATIVE WORK EXPERIENCE EDUCATION PROGRAM
COORDINATOR JOB VISITATION REPORT

Foothill ______
948-8590

Student ______________________ Firm Name ______________________

Date(s) of Visit ______________________ Coordinator ______________________

Consulted with ______________________ Title or Department ______________________

Type of work student is performing ______________________

	Excellent	Satisfactory	Unsat.	Comments
Employer satisfaction with student's achievement of performance objectives				
Employer satisfaction with Work Experience Program				
Student satisfaction with educational opportunities at the job site				
Coordinator's appraisal of on-the-job supervision provided				
Coordinator's appraisal of vocational learning experiences available to the student on the job				

1. Should this student receive college credit for this education/employment affiliation again next quarter? ______________________

2. What additional action or consultation is needed? ______________________

Student Consultation Dates ______________________

Other Comments and Observations:

Original to WEE Secretary - Copy to Coordinator

WE 60973

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